Different hands

# Different hands

Markets for intermediate skills
in Germany, the U.S. and the Netherlands

*Verschillende Handen*
Markten voor middelbare kwalificaties
in Duitsland, de V.S. en Nederland

(met een samenvatting in het Nederlands)

Proefschrift

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## Foreword

This dissertation originated in the wake of my internship for a study for the Dutch Scientific Council for Government Policy, in the final months of 1992. The dissertation project itself started March 1st, 1993. Until June 1st, 1997, I was employed as a Ph.D student at the Netherlands School for Social and Economic Policy Research ('Onderzoekschool Arbeids, Welzijn en Sociaal-economisch Bestuur') at Utrecht University and did the field work on the three national markets for intermediate skills that provide the empirical basis for this book.

Having already published the empirical results of the three country studies in separate books and a couple of papers, and with an article containing the first draft of what was to become the theoretical chapter on its way towards publication, I was fortunate enough to find myself recruited by Ton Wilthagen to come work as a senior researcher with the Hugo Sinzheimer Instituut at the University of Amsterdam. After five and a half wonderful years there, I accepted the invitation to join the Hanzehogeschool as 'lector arbeidsverhoudingen' to set up an applied labor market research unit there. Busy with various new projects over those later years, I spent various summers refining the integration of the three aforementioned country studies and the theoretical work into this volume. There's probably a reason that Sisyphus is the only figure from Greek mythology that I distinctly choose to remember from my classical high school education. Finally, this dissertation rests as my defense, and I find tremendous satisfaction in its completion. The delay did offer a few blessings in disguise. For one, it allowed me to include the first national evaluation of the Dutch Vocational and Adult Education Act ('Wet Educatie en Beroepsonderwijs' or WEB) in the analysis. For another, and in no small part thanks to the excellent feedback from my counselors, I think I have managed to find the best tone for its conclusions.

I have quite a few people and organizations to thank over those years. The Dutch Ministry of Health, Welfare and Sport sponsored the original four years of the Ph.D project. The (unfortunately discontinued) Netherlands School for Social and Economic Policy Research at the Universiteit Utrecht hosted it and employed me. Willem Dercksen first lured me into an internship that (while I had been stupid enough to initially decline the position) got me seriously intrigued by the topic of vocational education and training governance. And he subsequently offered me this Ph.D. project. Frans van Waarden organized various internal seminars in those years that got me theoretically addicted to the delicate interplay between markets and institutions. Roger Henke was the ideal street-level bureaucrat for a resident as well as a traveling Ph.D. student. Maaike Zorgman, Peter van Leeuwen, Wim van der Voort, Frank Tros, Markus Haverland were the most prominent among the stimulating and enjoyable colleagues.

The Dutch Organization for Scientific Research, the Dutch Ministry of Education, Culture and Science (in particular Peter van den Dool, Bert de Vries and Bernard Verlaan), the Dutch Ministry of Social Affairs and Employment (in particular Marga Drewes), the Deutscher Akademischer AustauschDienst, and the Netherlands America Commission for Education Exchange each sponsored various parts of the German and American field work for this project. The German Institute for Vocational Education and Training ('Bundesinstitut für Berufsbildung') hosted me for four inspiring months in Berlin. Jochen Reuling gave me ample intellectual attention and feedback, and introduced me to a great number of relevant others in the field, starting with Dutch Berliner Dick Moraal.

The Industrial Relations Research Institute of the University of Wisconsin-Madison offered me an equally stimulating environment for six months. Wolfgang Streeck and director Paula Voos invited me there. Joel Rogers, Jonathan Zeitlin and others provided guidance and introductions in the field. The Center On Wisconsin Strategy of the University of Wisconsin-Madison (COWS; again Joel Rogers and Laura Dresser) introduced me to Wisconsin alumnus Eric Parker, whose dissertation helped me tremendously. COWS and Eric also introduced me to the Wisconsin Regional Training Partnership; and COWS organized a seminar for my return visit to Madison. The Center on Work and Education of the same university (specifically, Allen Phelps) provided me with an additional home base during the Wisconsin field work, and they invited me back to present at the Workplace Learning Conference in Milwaukee in April 1996. The National Institute for Metalworking Skills and its advisor Pete Trott offered me the chance to gain a true appreciation of the vast task facing such skills standards partnerships in the U.S. by inviting me to attend their meeting in Cleveland, Ohio in January 1996. Jeff Rothstein and the rest of his class made me never regret having opted for a Wisconsin winter instead of an analysis of vocational education and training in, for example, the Hawaiian spring. Last (but not least) I first met David Finegold in Wisconsin. Being able to reflect on my findings and ideas with David himself on a number of occasions was very fortunate, very helpful, and very enjoyable.

The Max Goote Kenniscentrum voor Beroepsonderwijs en Volwasseneneducatie (in particular Fons van Wieringen and Willem Houtkoop) organized and organizes a stimulating continuous dialogue between Dutch academic VET researchers (such as Ben Hövels and Loek Nieuwenhuis) and policymakers through various seminars and publications. Their work provided me with an excellent intellectual home base in the Netherlands on which I could rely. They also published my first individual book, on the German apprenticeship system, and subsequent other work.

The Hugo Sinzheimer Institute at the Universiteit van Amsterdam was a true home in my years there. It offered me a wonderful director and colleague in Robert Knegt; a talented 'apprentice' in Martijn van Velzen (not just a buddy but also almost as stubborn as myself); the lovely Astrid Ornstein (who really ran our show there);

many other great colleagues (including Frank Tros, who re-joined me there); and the chance to set up and continue my own line of research. I truly thought that I would never find anything close to it when I left. I was right.

And I was, of course, wrong, or I would have not just extended my contract at the Hanzehogeschool Groningen. Geiske Steendam, Heleen van Balen and Jannes Houkes were instrumental in getting me there. Ina Homans and her staff (who really run the show there) made me feel at home from day one. Trijnie Faber offers me ample room to maneuver, feedback to help focus our efforts, and rewards to those efforts by steadily integrating our applied research into her Hanze School of Law. Past and present members of my 'kenniskring' made and make me stay. Marije Bosscha, Ilse Koning and Eddy Kootstra did most of the heavy lifting in the editing and lay-out of this book. The English correction was provided from outside the Hanzehogeschool, by Tjerk Busstra and 'paraneef' Mary de Laat.

Most importantly, however, I have to thank the roughly two hundred vocational education and training experts of various organizations at different levels in the Netherlands, Germany and the United States that I have interviewed over the years, for providing me with ample time and precise information on the operation of their VET system from their perspective. The importance of all those interviews for gaining a delicate appreciation for the operation of different vocational education and training markets just cannot be overestimated. While I have chosen to phrase the analysis in this book without direct quotiations, I could not have grasped these systems and their nuances without them.

Special thanks go to my three counselors. Willem Dercksen challenged me "to complete the incomplete work of the Wagner committee" when granting me my master's degree in december 1992. The likelihood that this (or another) dissertation will actually meet that challenge is of course somewhere between slim and none. When he left for the Pacific, however, continued cooperation became a little bit too impractical.

Ton Wilthagen was the first to step in. He has been both a friend and an ideal colleague and mentor since we met. The choice to assist him with his ambition to develop a flexicurity research line in our Amsterdam years was one of the better ones I have ever and will ever make. The same goes, of course, for my choice to continue our cooperation by starting my own applied research group in Groningen - a chance Ton encouraged me to accept, despite the fact that it prevented me from keeping my promise to join him full-time in the NWO flexicurity program we had just acquired.

And, finally, I was fortunate enough to have my first mentor, Peter Leisink, join us for the final part of this journey. When I joined the political student group and the Faculty Council at the Utrecht Faculty of Social Sciences, Peter was the resident expert on faculty politics of the Faculty and our coalition partner in that Council. Peter was always there to provide insight and advice. Looking back on those years,

I have always felt that my intellectual and professional development owes much more to my student political activities than to the courses I took. Peter was a large part of that. And he and Ton were a big help in refining my comparative analysis.

For me, vocational education and training as a research topic offered me the chance to combine my interests in both education and labor market governance. Friends (in particular little big 'brother' Berend Wilkens) and family I thank for their patience through the years, as well as the occasional lack thereof. I hope this book will now enable them to understand that what I learned while analyzing markets for intermediate skills is that

it never gets old.

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## 1. Introduction: research questions and design

This book is about markets for intermediate skills. It is also about the coordination within and between the (vocational) education system and the (sub-baccalaureate) labor market, and the institutions that govern them. Our goal was to improve our understanding of how particular governance regimes influence the operation of vocational education and training (VET) markets. We conducted an international comparison of three different governance regimes of VET markets in Germany, the Netherlands and the American state of Wisconsin. The central question underlying the national analyses and comparisons is:

How do markets for intermediate skills operate in Germany, the Netherlands, and the American state of Wisconsin?

For each of the three national cases the following questions will be answered:

- What options for vocational education and training exist?
- Which rules and actors govern them?
- How does the interaction of these rules and actors help to explain the actual choices of young people and employers regarding vocational education and training in these countries?

The idea for this project originated in a previous project, a policy-oriented study of the ongoing reform of Dutch upper secondary vocational education and training (VET) in the early nineteen nineties on behalf of the Dutch Scientific Council for Government Policy ('Wetenschappelijke Raad voor het Regeringsbeleid' or WRR; cf. Dercksen & Van Lieshout, 1993). That project analyzed apparent dilemmas in the progress of the policy reform of the Dutch VET system at the time. One of the intriguing aspects of that Dutch reform effort was that it was simultaneously inspired by two foreign examples - from countries (Germany and the U.S.) that are generally considered to be almost opposite examples where it comes to the institutionalization and operation of markets for intermediate skills.

The ambitious reform of Dutch VET legislation had triggered our interest in the governance of VET markets, and in particular the interplay between institutional arrangements and actors' strategies. VET reform efforts were targeting particular institutional arrangements that either were considered accepted best practices (such as German apprenticeship) or innovative reforms (such as various attempts at the improvement and creation of national skills standards systems). Knowledge on how particular institutional arrangements shape the operation of VET markets and the strategies of various actors (primarily, young people and firms) in such markets is relevant to such reform efforts. This research project thus concentrated

on the fourth level of 'methodological insertion' into the object of study that Giddens (1984: 327-328) distinguishes: the specification of institutional orders. Giddens (1984: 329) describes the specification of institutional orders as follows:

> "…the specifying of institutional orders, involves analyzing the conditions of social and systems integration via identification of the main institutional components of social systems."

In particular, we wanted to focus our study on the analysis of particular institutional arrangements that attracted international attention from policymakers looking for inspiration for their own national VET reforms. The first of those was apprenticeship in particular, and more generally, formal work-based training. Not just the Netherlands, but many other countries were inspired by the successful German apprenticeship system. A traditional apprenticeship model is that in which apprentices combine work-based training (and productive work) at a firm for four days a week with related instruction at a school on day five. Under the slogan *"dualisering"* (dualisation), increasing work-based training was included as a separate goal in Dutch policy reforms since the early nineteen eighties. The Organization for Economic Cooperation and Development (OECD), an international association of countries with a developed capitalist economy, had launched a program on the changing role of vocational and technical education and training (VOTEC) that reflected this international interest (cf. Van Den Dool et al., 1994; Koch & Reuling, 1994; OECD, 1994a; 1996a; DOE & OECD, 1994). The German apprenticeship system was (and still is) considered a 'good practice' example of an initial VET system, as it supports a 'high-skills equilibrium' (cf. Finegold & Soskice, 1988; Soskice, 1994; Van Lieshout, 1996a; cf. chapter 2). While most experts were (and are) skeptical about any effort to straightforwardly copy the German apprenticeship system abroad (cf. Finegold & Soskice, 1988), various national governments nevertheless were inspired by this foreign example and tried to incorporate lessons in their own policies. Apart from the Netherlands, such efforts have been particularly noticeable in countries perceived to suffer from a 'low-skills equilibrium': the U.K. and the U.S. (Finegold & Soskice, 1988).

Besides work-based training, the other important institutional aspect of the German apprenticeship system that attracted international interest was the role of (binding) skills standards. German firms can not just train apprentices in any way they choose. Each apprentice is trained in a training occupation that is regulated by binding national skills standards developed by representatives of employers' associations, unions, VET schools and government (i.e. Koch & Reuling, 1994; Van Lieshout, 1996a). Next to work-based learning, skills standards systems were another important theme in national VET reform efforts and international reform debates such as in the VOTEC program.

Simultaneously, the Dutch government aimed to increase the room to maneuver

for individual schools through its VET reform. International inspiration for this policy aspect did not come from Germany, but from the operation of American two-year colleges in their regional labor markets. Schools should play an active, almost entrepreneurial role in regional markets for intermediate skills – not unlike some of these two year colleges did. Contrary to Germany, however, the U.S. was and is considered a low-skills equilibrium, with a market for intermediate skills operating quite different than in Germany. In fact, there were reform efforts on their way in the U.S. at that time that themselves took inspiration from German apprenticeship and tried to stimulate work-based training and skills standards systems to help improve the American market for intermediate skills.

We thus decided to analyze the institutionalization and operation of markets for intermediate skills in two other countries, and compare and contrast them with the Netherlands: one other country classified as a high-skills equilibrium (Germany), the other as a low-skills equilibrium (U.S.). We thus opted for a 'most-different systems' design (cf. Przeworski & Teune, 1970) in our choice of countries. Analyzing contrasting cases on their governance regimes, the operation of the VET market and the type of equilibrium achieved within the national institutional context such as Germany and the U.S. should help improve our analysis of the role of particular institutional arrangements (such as an apprenticeship legislation) in different contexts.

Germany (chapter three) provides us with a case where work-based learning (apprenticeship) and national skills standards cover most VET, to the extent that they can be considered to compose a near monopoly in the national market for intermediate skills. The result is a generally acknowledged high-skills equilibrium. The U.S. (chapter four) provides us with a case where work-based learning (apprenticeship) and national skills standards play a minor role in the market for intermediate skills. A market, that is characterized as a low-skills equilibrium. The Netherlands (chapter five) provides us with another high-skills equilibrium, based on somewhat similar and somewhat different institutions when compared to Germany. While apprenticeship and national skills standards also play an important role in the Dutch VET market, primarily school-based VET tracks account for the majority of Dutch VET.

We have made two further specifications in terms of geographical scope. First, at that time, the socio-economic situation in (former) East Germany, and the problematic attempt to build a West-German style apprenticeship system there, implied that we would have to do two separate case studies for West and East. Interesting as a case study of the East-German attempt to build a West-German style apprenticeship system would be, for our comparative purposes we have limited ourselves to the West-German case of an established, apprenticeship-based high skills equilibrium.

Second, the variance in VET (and labor market) institutionalization between individual American states made us to focus the empirical work there on one

particular American state. Because of our interest in work-based learning and skills standards systems, we have opted for a state where apprenticeship and related skills standards have historically played a somewhat less marginal role than in most other American states, and where reform efforts were under way to strengthen and expand these aspects. The state of Wisconsin offered this opportunity. This state is in fact particularly intriguing as Wisconsin had already drawn inspiration from a study trip to Germany and its apprenticeship system when drafting its 'traditional' apprenticeship Act early in the twentieth century – more than half a century before the recent interest in (German) apprenticeship peaked in the U.S..

As to the methodology of the casestudies, we had learned the value of a substantial number of interviews in addition to desk research in our previous project on Dutch VET policy reform. Governance of markets for intermediate skills generally occurs at three, interacting, levels: firstly, at a local level, with the trainee, a school and/or a firm as the most relevant actors; secondly, at the sector level, where employers' associations and unions may or may not institutionalize collective training supports and/or regulations; and finally, at the national level, where the state dictates education and labor market laws, sometimes through a process that includes input from other national actors (such as school associations and peak organizations of employers and unions). The view and appreciation of how VET markets operate can differ substantially depending upon the point of view from which you experience it. For a researcher, it is therefore helpful to gather the experiences from different parties at different levels, and in different sectors. We therefore chose to conduct a significant number of interviews with various types of actors at each of the three levels in Germany and the U.S. The interviews were intended to gain an understanding of the operation of VET systems beyond the relatively well-known basics such as laws and other relevant rules: of how they are implemented and created in daily practice, and the opinions and motivations of the actors concerned.

At the national level, we have interviewed representatives of relevant government departments, peak employers' associations and union federations, other relevant national organizations and leading research experts. Since both the U.S. and Germany are federal states, we have interviewed representatives of these actors at the federal level as well as at the level of an individual state (Wisconsin in the U.S., Baden-Württemberg in Germany).

At the sector level, we thought it important to gain an understanding of *intra*national differences in the institutionalization of markets for intermediate skills by specifically focusing on three different sectors: construction, metalworking and banking. We have selected these three, as they refer to quite distinct types of work, while on the other hand they are sectors that tend to be relatively well researched – which means that the chances of relevant secondary information being available to the researcher would be relatively good in each country. Within the context of this project, we lacked the resources for extensive, in-depth case studies of each of

these sectors in each of these countries, so we had to limit ourselves to interviews with representatives of employers' associations and unions and sector experts from VET schools and a review of literature and statistics.

At the local level, we interviewed representatives from different VET schools and firms, as well as other relevant organizations or institutions. At this level, we chose to limit the interviews with firms to just one economic sector (metalworking). With the limited number of interviews we could conduct with individual firms within this research design, we thought it more important to gain an appreciation of similarities and differences between firms' training policies in the same region and sector (so, for similar jobs, and within the same context of sectoral and national regulations). More specific information on the field work is included in the introduction of each country chapter.

Chapter two will explore relevant theories and concepts to provide us with a theoretical approach to address these issues. Chapters three through five will subsequently explore the institutionalization and operation of the market for intermediate skills in each of three 'national cases': (West) Germany, the American state of Wisconsin, and the Netherlands, with a specific focus on work-based learning and national skills standards. The institutionalization and operation of these national markets in the nineteen nineties were studied through a combination of desk research and interviews with experts involved in the governance of these markets at various levels. The sixth and final chapter will summarize the results and answer the central question, and will discuss the merits of the theoretical approach presented in chapter two on the basis of the analysis and comparison of the three cases.

# 2 An actor-centered institutionalist approach to markets for intermediate skills

## 2.1 Introduction

This chapter will introduce the theoretical framework used to analyze markets for intermediate skills in this book. The framework builds heavily on key ingredients from various theories, but combines these ingredients into a perspective, developed specifically for the analysis of markets for intermediate skills. The approach is therefore intentionally an eclectic one. On the appropriateness of such an approach, we agree with Giddens (1984: xxii):

> "To some this may appear an unacceptable eclecticism, but I have never been able to see the force of this type of objection. There is an undeniable comfort in working within established traditions of thought - the more so, perhaps, given the very diversity of approaches that currently confronts anyone who is outside any single tradition. The comfort of established views can, however, easily be a cover for intellectual sloth. If ideas are important and illuminating, what matters much more than their origin is to be able to sharpen them so as to demonstrate their usefulness, even if within a framework which might be quite different from that which helped to engender them."

While eclecticism is nothing to be avoided, it does demand an elaboration of the framework and its main concepts. Giddens (1984: xx) pointed out that this does not require a complete epistemological elaboration:

> "Rather than becoming preoccupied with epistemological disputes (…) those working in social theory, I suggest, should be concerned first and foremost with reworking conceptions of human being and human doing, social reproduction and social transformation."

In this fashion, this book is concerned with reworking conceptions of vocational education and training (VET) and its institutionalization. The most important conception to be reworked is that of the 'market'. Market mechanisms are important coordination mechanisms in vocational education systems and on markets for intermediate skills. However, there are other coordination mechanisms that are equally important, such as the state, firms, and associations. And these coordination mechanisms influence one another. It is important to organize empirical research in a way that is sensitive to the existence of alternative coordination mechanisms that, in their interaction, shape social fields – such as markets for intermediate skills[1].

This chapter will elaborate the theoretical framework and its main concepts that will guide the analysis throughout this book. Actor-centered institutionalism (Mayntz & Scharpf, 1995; Scharpf, 1997) serves as the backbone of our theoretical approach (section 2.2). Actor-centered institutionalism proceeds from the assumption that social phenomena are to be explained as the outcome of interactions among intentional (individual and/or collective) actors, but that these interactions are structured, and the outcomes shaped, by the characteristics of the institutional settings within which they occur (Scharpf, 1997: 1). It thus fits the primary requirement formulated by Dercksen & Kamps (1992) for promising theories to analyze markets for intermediate skills: it combines institutional and actor-centered theories.

Actor-centered institutionalism, however, offers a framework of how to proceed with empirical studies rather than a fully specified theory (Scharpf, 1997: 3), let alone a fully specified theory on the operation of markets for intermediate skills. After introducing the general actor-centered institutionalist framework in section 2.2, the remainder of this chapter will 'map' the problem at hand (the 'production' of intermediate skills) into this framework by exploring and connecting various 'field-specific' theoretical insights on skills production and acquisition.

## 2.2 Actor-centered institutionalism

### 2.2.1 The new institutionalism

Institutionalist perspectives once figured prominently in both economics and sociology. The 'old' institutionalism consisted mainly of detailed configurative studies of different administrative, legal and political structures; it did not encourage the development of intermediate-level categories and concepts that would facilitate truly comparative research and advance explanatory theory (Thelen & Steinmo, 1992: 3). In sociology, for instance, functional theory served as the sociological counterpart of anatomy in medical studies and physiology in biology. It viewed human interactions as integrated in social systems, and focused on identifying and labeling the system's parts. Particular phenomena were often explained in terms of the 'needs' of the collective system.

From the 1950s onwards, this old institutionalism has faded and a 'behavioral revolution' (Thelen & Steinmo, 1992: 3) occurred: rational choice theories such as neo-classical economics rose to dominate the social sciences. Rational choice theories are based on the concept of methodological individualism, which prescribes that (collective) phenomena are to be explained in terms of statements about individual actors (cf. Boudon, 1981: 52). Actors themselves are analyzed as rational utility maximizers, whose preferences are exogenously given. At the time, the Western world opted to strengthen international ties, and prosperity grew rapidly in each

of its countries over the 1950s and 1960s. So the potential convergence among traditionally very different nations emerged as a more dominant *explanandum* than remaining national (institutional) differences. While institutions did not disappear from the research agenda, they had been pushed to the side, as the spirit of the new behavioralist paradigm was to get beyond the formal structures of the old institutionalists, by looking at the actual, observable beliefs and behaviors of groups and individuals (Thelen & Steinmo, 1992: 4).

The economic shocks in the early seventies, however, resulted in quite different responses from these same nations, and in subsequently different paths of economic development. As the average economic and employment performance of OECD countries declined, the relative distance between more and less successful countries increased considerably for most indicators of economic performance (Scharpf, 1987: 227). So explanation of cross-national differences that were apparently more persistent than one had come to think, regained a prominent position on the agenda. While rational choice theories still dominate much of the social sciences today, this historical event has marked the re-emergence of institutionalist paradigms. This new institutionalism is more than a carbon copy of traditional institutionalism. The various versions of this new institutionalism share a family tie in criticizing certain aspects of rational choice theories. Neo-institutionalist paradigms do not try to reduce all collective phenomena to mere aggregates of individual actions, but see institutions as having an irreducible *sui generis* role in determining human action (Crouch et al., 1999: 23). And perhaps the most important respect, in which the various neo-institutionalist paradigms differ, is the extent to which they simultaneously incorporate (relaxed) core elements of rational choice theories – as the following overview of various neo-institutionalist paradigms will illustrate. Mayntz & Scharpf (1995: 40-43) distinguish[2]:

- economic institutionalism (perhaps better know as transaction cost economics), which tries to explain the existence of institutions by a relaxed version of rational choice theory (cf. Williamson, 1975; 1985);
- an organizational-sociological institutionalism; it criticizes neo-classical economics for primarily viewing organizations (firms in particular) as production/exchange systems shaped by technologies and the transactions they are involved in. It alternatively stresses symbolical and cognitive elements within organizations such as opinions, ideologies and myths (cf. Powell & DiMaggio, 1991);
- institutional economics, which aims for an institutional explanation of economic facts (cf. Granovetter, 1985; Streeck, 1992);
- an institutionalism within the political sciences which concentrates its criticism on the reductionist and utilitarian character of rational choice approaches, which exclusively explains political phenomena as aggregate effects of utilitarian behavior by individuals, and neglects organizational structures and normative and symbolical causes of individual behavior (cf. March & Olsen, 1989);

- a second version of institutionalism within the political sciences, which concentrates its criticism of mainstream theories on the neglect of the consequences of political processes and their organization, which influence the aggregation of individual behavior into collective effects (cf. Evans et al., 1985).

To be sure: neoclassical economics and sociological rational choice theories still dominate much of social sciences today and have found ways to improve their paradigms in the face of these criticisms. For neoclassical economics, important examples have been the increased attention for the role of information and information imperfections (Arrow, 1974), of bounded human rationality (Williamson, 1975), of customs and norms (Akerlof, 1984), and of market imperfections, failures and rigidities as well as labor market segmentation (Solow, 1980). Williamson's transaction cost economics is cited in the literature as both a neo-institutionalist and a rational choice paradigm, which goes to show that, just as the distinction between the political left and right has become substantially less clear-cut in recent times, the same holds true for rational choice theories and neo-institutionalist perspectives.

### 2.2.2 Actor-centered institutionalism: an introduction

Mayntz & Scharpf (1995) propose to combine methodological individualism with institutionalism in a framework they label 'actor-centered institutionalism' (also cf. Scharpf, 1997). Actor-centered institutionalism offers '…a tailor-made approach for research on the problem of governance and self-organization on the level of entire social fields' (Mayntz & Scharpf, 1995: 39), in particular in fields related to state intervention.

Of the aforementioned versions of new institutionalism, actor-centered institutionalism is most closely related to the (second) version from the political sciences, which concentrates its criticism of mainstream theories on the neglect of the consequences of political processes and their organization that influence the aggregation of individual behavior into collective effects, but it distinguishes itself from it in a number of ways (Mayntz & Scharpf, 1995: 43):

- actor-centered institutionalism does not confine itself to political institutions;
- actor-centered institutionalism works with a narrow definition of institutions;
- actor-centered institutionalism analyzes institutions both as dependent and independent variables;
- actor-centered institutionalism does not ascribe a *determining* influence to institutions, but sees institutional factors as building a – stimulating, enabling or restricting – *context* for action.

The basic assumption underlying actor-centered institutionalism is that an analysis of structures without reference to actors is as handicapped as an analysis of actor's behavior without reference to structures (Mayntz & Scharpf, 1995: 46). Instead of assuming a dominant role for either institutions or actors, the sharp distinction between institutions and observable actions in actor-centered institutionalism tries to integrate both perspectives: action-theoretic or rational choice and institutionalist or structuralist perspectives (Mayntz & Scharpf, 1995: 46; Scharpf, 1997: 36). Actor-centered institutionalism thus preserves the principle of methodological individualism while connecting it with institutionalism (Scharpf, 1997: 1):

> "…as it proceeds from the assumption that social phenomena are to be explained as the outcome of interactions among intentional actors (…) but that these interactions are structured, and the outcomes shaped, by the characteristics of the institutional settings within which they occur."

To the extent that behavior is shaped by institutions, the behavioral regularities we can expect are likely to vary with time and place – because institutions vary across time and place. So the best social sciences can hope for are not universal theories, but 'sometimes true theories' (Coleman, 1964: 516-519) that provide explanations that hold only under specific institutional conditions. To explore explanations in such cases, the institutional context must be varied in comparative studies of a more qualitative nature. The problem is that the potential number of different constellations of situational and institutional factors in this type of research will be so large that it is unlikely that exactly the same factor combination will appear in many empirical cases. This means that the requirements for statistical hypothesis testing will often not be met: given the number of potentially relevant variables, we will usually not have the requisite number of cases to perform statistical tests. And contrary to the natural sciences, the possibilities for experimental designs that permit isolation and systematic variation of a single factor are limited – in particular when it comes to macro-level questions. The result is an unattractive dilemma: if we attempt to follow standard methodological precepts we have to reduce the complexity of our hypothesis drastically by focusing on a greatly reduced number of variables. But the systematic effects of all those omitted variables cannot be controlled, so the results would be of doubtful validity. On the other hand, descriptive case studies alone are not enough; they tend to overemphasize historically contingent sequences of events at the expense of structural explanations[3]. What we need are hypotheses that specify a causal model showing why and how a given constellation of factors could bring about a particular effect, and we need to have empirical evidence that the effect predicted by the hypothesis is in fact being produced. This requires a shift away from the focus on the quality of methodological procedures toward a greater concern for the quality of the hypotheses (Scharpf, 1997: 22-29).

Actor-centered institutionalism offers a framework of how to proceed with empirical studies, rather than a fully specified theory (Scharpf, 1997: 37). Compared to a fully specified theory, a framework has less information content in the sense that fewer questions will be answered directly and more will have to be answered empirically (Scharpf, 1997: 30). What it should do is provide us with a descriptive language, and an ordering system that describes the location of, and the potential relationships among, more limited 'causal mechanisms' (cf. Elster, 1989; Little, 1991) that we draw upon for the theoretically disciplined reconstruction of our nearly unique cases (Scharpf, 1997: 30; 37). The remainder of section 2.2 will further elaborate the main characteristics of the 'descriptive language', 'ordering system' and 'causal mechanisms' provided by actor-centered institutionalism: institutions, actors and actor constellations.

### 2.2.3 Actor-centered institutionalism: overview and explanatory approach

In explaining social phenomena, actor-centered institutionalism sees observable behavior by (individual or composite) actors as a 'proximate' cause, while the institutional context functions as a 'remote' cause (Mayntz & Scharpf; 1995: 46-47).

The first step to explanation is to identify the set of *interactions* that are to be explained, as this constitutes the unit of analysis. This then allows us to identify the *actors* that are actually involved, and whose choices will ultimately determine the outcome (Scharpf, 1997: 43). Actors are assumed to be capable of making purposeful choices among alternative courses of action (Scharpf, 1997: 7). They are assumed rational in the sense that they will attempt to maximize their own self-interest (in terms of payoffs); but they are not assumed to be perfectly rational. Actors have specific *capabilities* and *action orientations* (Scharpf, 1997: 43). We will elaborate on actors and their orientations in section 2.2.5. It is important, however, to already emphasize here that many of the actors analyzed in actor-centered institutionalism are not individuals. While the truism of methodological individualism is that in the final analysis only individuals can act, we know that individuals will often act in the name of and in the interest of another person, a larger group, or an organization (Scharpf, 1997: 52). And in particular an analysis of sectoral governance and self-organization in state-related fields will often have to focus on the interactions between *composite actors*, such as political parties, labor unions, and firms, rather than on individuals acting on their own account (Scharpf, 1997: 39). This is due to both the inherent focus on societal subsystems, and the fact that in particular state-related sectors tend to be densely organized (Mayntz & Scharpf, 1995: 43-44). The notion of a composite actor implies a capacity for intentional action at a level above the individuals (Scharpf, 1995: 52). Since, however, only individuals are capable of having intentions, the capacity to act at

the higher level (e.g. a union) must be produced by internal interactions between individuals (its members and staff). The result is the *multi-level* character of any conceptualization of actors above the level of individuals of at least two levels. On one level, a composite actor (e.g. a union) has certain resources that it employs in strategic action *vis-à-vis* other (composite) actors (e.g. an employers' association); on another, that same composite actor is an institutional structure within which individuals (union members and staff) interact to produce the actions ascribed to the composite actor. We will more fully discuss the concept of composite actors in section 2.2.5.

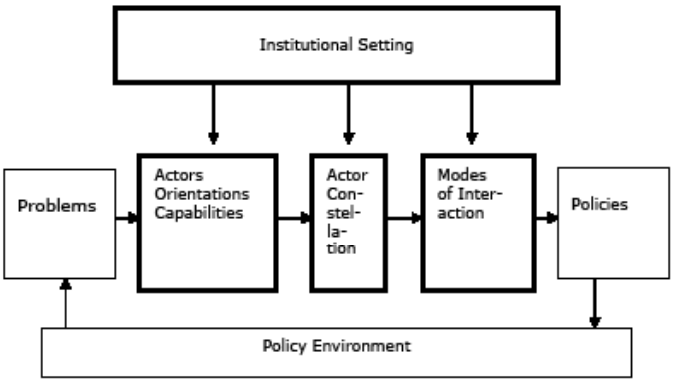
The courses of action available to an (individual or composite) actor are labeled *strategies*. More often than not, strategies available to different actors in the same field are interdependent, in the sense that the *outcome* of a particular strategy chosen by an actor will simultaneously depend upon the choices of other actors (Scharpf, 1997: 7), and the other way around. Markets are a good example of this: if I want to buy squid at my local market today, the chances of success will depend on the amount of squid offered by vendors as well as the number of other locals who had a taste for squid when they woke up this morning. Outcomes in turn reflect *payoffs* for actors. Payoffs represent the valuation of a given set of possible outcomes by the preferences of the players involved (Scharpf, 1997: 7); for instance, getting good quality squid, getting squid of an inferior quality and getting no squid.

When strategies of different actors are interdependent, what is important is the *actor constellation* among the plurality of actors involved. The constellation describes the actors involved, their strategy options, the outcomes associated with strategy combinations, and the preferences of the actors over these outcomes (Scharpf, 1997: 44-45). The actor constellation describes a static picture, rather than actual interactions producing outcomes. These actual interactions can differ widely in character: any given actor constellation can correspond with a variety of *modes of interaction* (Scharpf, 1997: 45-47). It matters, for example, whether the same group of people will interact within a system of majority voting, or under hierarchical direction (a boss decides) to achieve a particular outcome. We will elaborate on actor constellations and modes of interaction in sections 2.2.6. and 2.2.7, respectively.

The proximate cause (observable behavior by actors) is influenced by the remote cause (institutions) in many ways. The institutional context constitutes (in particular composite) actors and actor constellations, structures actors' disposal of resources, influences their orientations, and shapes important aspects of situations that confront individual actors (Mayntz & Scharpf, 1995: 49), as section 2.2.4 will discuss. But it does not constitute all types of action and action-relevant factors, and where it does, it does not completely determine action. Laws, for instance, shape the existence of collective actors (e.g. firms), but they do not completely determine

their characteristics as a social organization, their orientation in a specific situation, or their actions (Mayntz & Scharpf, 1995: 47). The same goes for the broader structures in which composite actors are embedded: a part of, for instance, their lasting relations will be institutionally prescribed, while other relations are more informal and unrelated to legislation. And while there are institutionally arranged incentives for interaction between certain actors, real situations will simultaneously contain numerous non-institutional incentives.

Figure 2.1: The domain of interaction-oriented policy research




*Source: Scharpf (1997), p. 44*

Scharpf (1997: 5-10) emphasizes the importance of thinking game-theoretically when connecting proximate and remote causes in explanations. His emphasis is on *thinking* game-theoretically: "It is sufficient that the basic notions of interdependent *strategic action* and of *equilibrium outcomes* be self-consciously and systematically introduced into our explanatory hypotheses." (Scharpf, 1997: 6-7). Strategic action implies that actors are aware of their interdependence and that in arriving at their own choices each will try to anticipate the choices of the others, knowing that they in turn will do the same (Scharpf, 1997: 10). Equilibrium outcomes are outcomes in which no player can improve his own payoff by *unilaterally* changing to another strategy. Together, these concepts provide the basis for counterfactual 'thought experiments' that systematically explore the outcomes that would have been obtained had the parties chosen other courses of action. If it can be shown that the actual outcome was indeed produced by strategy choices that, for all parties involved, were the best that they could do under the circumstances, one has a persuasive explanation (Scharpf, 1997: 10).

### 2.2.4 Institutions in actor-centered institutionalism

The framework of actor-centered institutionalism emphasizes the influence of institutions on the perceptions, preferences, and capabilities of individual and composite actors and on their modes of interaction (Scharpf, 1997: 38). Within the new institutionalism in general, there are about as many definitions of the concept of an institution as authors that have written about it. Some employ a very broad definition of institutions, in which the concept refers to a broad range of categories. March & Olsen (1989), for instance, include routines, procedures, conventions, roles, strategies, organizational forms and technologies, as well as beliefs, paradigms, codes, cultures and knowledge that surround roles and routines. Others employ a much narrower definition. North (1990: 3), for instance, defines institutions as "rules of the game in a society, or, more formally, humanly devised constraints that shape human interaction".

Actor-centered institutionalism falls in the second category, as it restricts "the concept of institution to systems of rules that structure the courses of actions that a set of actors may choose." (Scharpf, 1997: 38). This definition does not only include formal legal rules that are sanctioned by the court system, but also social norms that actors will generally respect and whose violation will be sanctioned by loss of reputation, social disapproval or withdrawal of cooperation and rewards (Scharpf, 1997: 38). Mayntz & Scharpf (1995: 45) point out two important consequences of this approach to institutions. First, this way institutions are not simply treated as the given result of a previous evolutionary development, but as things that can be intentionally created and changed through the actions of specific actors. Second, restricting the definition of institutions to specific regulatory aspects is an important step in realizing the premise that the institutional context enables and restricts, but not fully determines behavior. Mayntz & Scharpf (1995: 45-46) correctly point out that when one would, for instance, also include daily routines into the definition of institutions, there would be little room left for individual actors to maneuver outside of the scope of institutions.

Within the framework, the concept of an institutional setting or context does not have the status of a theoretically defined set of variables that could be systematized and operationalized to serve as explanatory variables. The point is that rules are highly individualized and produce their causal effects only in their concrete shape. The term 'institutional setting' or 'context' therefore serves as a shorthand term to describe the most important influences on those factors that in fact drive the explanations: actors with their orientations and capabilities, actor constellations and modes of interaction (Scharpf, 1997: 38-39).

Institutions have explanatory value because they reduce empirical variance. In the extreme case, sanctioned rules will effectively reduce the range of potential behavior by specifying required, prohibited, or permitted actions (cf. Ostrom et

al., 1994: 38). More often, however, positive and negative incentives attached to institutionalized rules will merely increase or decrease the payoffs associated with the use of particular strategies, and hence their probability of being chosen by self-interested actors. In this sense, the view of institutions is in harmony with that of most rational-choice theorists (Scharpf, 1997: 39).

But institutions do more than constrain feasible strategies: they also constitute composite actors, and shape the valuation and perception of (possible) outcomes. As to the first: composite actors are institutionally constituted because they were created according to pre-existing rules (e.g. schools according to education laws) and they depend on rules for their continuing existence and operation (e.g. the state education budget). Composite actors only exist to the extent that the individuals within them are able to coordinate their choices within a common frame of reference that is constituted by institutional rules. Such rules define the membership of composite actors, material and legal action resources they can draw upon, the purposes they are to serve and the values they are to consider; they are of particular interest within actor-centered institutionalism (Mayntz & Scharpf, 1995: 48; Scharpf, 1997: 39). Likewise, some institutions create arenas where various actors could interact, as well as occasions or reasons to do so (Mayntz & Scharpf, 1995: 48). Where institutions ascribe tasks to actors, and put actors into a particular constellation with one another, one can also speak of social differentiation (Mayntz, 1988). Second, as rules also (co-)define interests and values, they will (co-)determine how outcomes will be evaluated by the actors involved. Thus, they (co-)determine the preferences of these actors. Moreover, institutionalized responsibilities also influence actors' perceptions. Actors with different responsibilities will often focus attention on different phenomena, and may have different views on the causes of the same phenomena. Once we know the institutional setting of interaction, we know a good deal about the actors involved, about their options, and about their perceptions and preferences (Scharpf, 1997: 39-40).

Institutions do not tell us all, however: a simple change of the incumbent CEO, for example, may induce a significant change in a firm's strategy without changes to the institutional context. Again, it is important to note that actor-centered institutionalism does not have a determinist view on institutions: institutions influence repertoires of more or less acceptable courses of action, and as such leave considerable scope for strategic and tactical choices of actors (Scharpf, 1997: 42). But if we have to consider all institutional as well as non-institutional factors influencing all actors involved, explanation and empirical research is in danger of becoming overly complex, and evolving into specific historical reconstructions. Actor-centered institutionalism therefore uses an institutional variant of the rule of *diminishing abstraction* (Lindenberg, 1991). It makes pragmatic sense to reduce levels of abstraction only gradually in the search for theoretical explanations. Therefore, we should begin with institutional explanations; and only when there

are clear indications that institutionally shaped perceptions and preferences will not provide satisfactory explanations, should we look for empirical information on more idiosyncratic, actor-centered factors – such as a change in CEO (Mayntz & Scharpf, 1995: 66; Scharpf, 1997: 42).

The fact that actor-centered institutionalism attributes an important explanatory role to institutions does in no way imply a determinist notion of social development over time. Scharpf (1997: 31) warns that many actor constellations have several possible outcomes. There may be more possible equilibrium outcomes, or none at all. Furthermore, institutions are created by human action (either through evolutionary processes of mutual adaptation or purposive design) so there is no reason to assume convergence towards one best solution – if that should exist at all. Institutional development is *path-dependent* in the sense that where you end up is strongly influenced by where you started from; and where you end up is not necessarily an equilibrium, let alone a Pareto-efficient one. Once institutions have been installed, and actors have come to rely on their coordinating function, institutional change will be costly. This makes institutions hard to reform or abolish even if the circumstances that brought them about and originally justified them, no longer exist (Scharpf, 1997: 41, also cf. Simitis, 1994)[4].

### 2.2.5 Actors and actors' orientations in actor-centered institutionalism

#### 2.2.5.1 Composite actors

As composite actors will typically figure prominently in actor-centered institutionalist analysis, it is important to discuss the conditions under which it is appropriate to apply actor-centered concepts to units that include several or many human beings (Scharpf, 1997: 51).

To begin with, we will discuss some cases were one might be tempted to apply the concept of a composite actor where one should avoid to do so. It is common practice to use *aggregate* categories for describing parallel actions of populations of individuals who share certain salient characteristics, such as 'the farm vote' or 'capital flight'. But there, the explanation in the end rests exclusively on the individual level, and the more simple aggregate description is justified exclusively by the assumed empirical similarity among individual choices. The same holds for more complicated micro-macro links than mere aggregation, such as the situation when similarity between individual actors' choices does not stem from similar characteristics or preferences, but where certain acts by some will increase or decrease the likelihood that others will act in the same way (for instance, bandwagon effects in election campaigns). In both cases, the aggregate effect is a result of individual choices from individual actors acting from their individual action perspectives and with regard to their individual

expected payoffs; but it is not in itself an object of anyone's purposeful choice. These aggregates are thus not capable of strategic action; but one could model such aggregates as responding in a predictable fashion to the moves of (individual or composite) actors that are capable of strategic action (Scharpf, 1997: 53-54).

To qualify as a composite actor, an actor must have the capacity for strategic action – which is to say that on the basis of accurate perception and adequate information-processing capacity, it is able to respond to the risks and opportunities inherent in a given actor constellation by selecting those strategies that will maximize its interests. In the *cognitive* dimensions, composite actors therefore depend on interpersonal information processing and communication. Strategic capacity increases as the worldviews and causal theories of relevant subgroups converge on common interpretations of a given situation and of the options and constraints inherent in it. In the *evaluative* dimension, the capacity for strategic action presupposes the integration of preferences. In general terms, this implies a capacity to accept some losses in order to obtain larger overall gains (or to avoid larger overall losses). The capacity for strategic action thus depends, on the one hand, on the preexisting convergence or divergence of relevant perceptions and preferences among the members of the composite actor, and, on the other hand, on the capacity for conflict resolution within the collective unit. Empirically, we are likely to find composite actors that are by and large capable of strategic action in those areas in which they are routinely engaged. Differences in strategic capacity will primarily show up when existing collective actors are confronted with novel problem situations that cannot be handled successfully within the existing repertoire of strategies (Scharpf, 1997: 58-59).

The term composite actor is thus reserved to constellations in which the 'intent' of intentional action refers to the joint effect of coordinated action expected by the participating individuals; they intend to create a joint product or to achieve a common purpose (Scharpf, 1997: 54). Composite actors build the context for action for these individuals, in the same way as the institutional environment builds the context for the organization's actions. This implies that in principle the same empirical phenomenon must be analyzed from two perspectives: from the outside as a composite actor and from the inside as an institutional structure within which individual actors interact to produce the actions ascribed to the composite actor (cf. section 2.2.3). If it were necessary to extend every analysis to the latter micro level each and every time, the concept of composite actors would be pragmatically useless (Scharpf, 1997: 52). This is where, as we saw in the previous section, Lindenberg's (1991) rule of 'diminishing abstraction' is taken to imply that, first, one should not seek to explain things by referring to actors' peculiarities what one can explain through institutions, and second, even when pursuing an actor-centered explanation, one should first work with simple assumptions and only test these empirically, when one cannot explain behavior otherwise (cf. Mayntz & Scharpf,

1995: 66). In particular composite actors are operating within institutional settings in which they are much less free in their actions than autonomous individuals might be; as a consequence, these actors are likely to find themselves in relatively stable 'actor constellations' that can be analyzed with the help of game theoretic concepts (Scharpf, 1997: 12).

Composite actors are further divided into 'collective' and 'corporate' actors. Collective actors are highly dependent on and guided by the preferences of their members, while corporate actors have a high degree of independence from the ultimate beneficiaries of their actions, and their activities are carried out by staff members whose own private preferences are supposed to be neutral (cf. Coleman, 1974). Collective actors may be further differentiated by two dimensions. The first is the degree to which critical action resources are either controlled individually by the members or have been collectivized and are controlled at the level of the collective actor. The second dimension refers to the action orientation. Unlike individual or corporate actors, collective actors are not autonomous in their choices but dependent on the preferences of their members. But these members' preferences may either be related to the separate goals of these members or refer to purposes that can only be defined at the level of the collective (Scharpf, 1997: 54-56).

Corporate actors are typically 'top-down' organizations under the control of an owner or hierarchical leadership representing the owners or beneficiaries. Even if they have 'members' in the formal sense, these are not actively involved in defining the corporate actors' course of action but rather have at the most the collective power to select and replace the leaders. Strategy choices are disengaged from the preferences of membership, and corporate actors may thus achieve identities, purposes and capabilities that are autonomous from the interests and preferences of the populations they affect and are supposed to serve (Scharpf, 1997: 56-57).

Figure 2.2 gives an overview of the actor types and characterizes them along a number of dimensions: the level that undertakes the actual action; the level of the purpose that the action seeks to serve; the level where important resources are controlled; and the mechanism through which strategic decisions are made and held accountable:

Figure 2.2: Aggregate, Collective, and Corporate Actors

| | Aggregate Actors | Collective Actors | | | | Corporate Actors |
|---|---|---|---|---|---|---|
| | | Coalition | Club | Movement | Association | |
| Action | Individual | Joint | Joint | Joint | Joint | Organization |
| Purpose | Individual | Individual | Individual | Collective | Collective | Organization |
| Resources | Individual | Individual | Collective | Individual | Collective | Organization |
| Decisions | Individual | Agreement | Voting | Consensus | Voting | Hierarchical |

*Source: Scharpf (1997), p. 57*

It is important to note that there are no sharp dividing lines separating the analytically defined categories of actors (cf. Scharpf, 1997: 58). But the distinctions are useful in alerting us to the fact that the degree and method of integration of composite actors varies widely, and that it is necessary to identify the conditions that may justify the simplified assumption that a plurality of individuals could, for certain purposes, be treated as composite actors. Therefore, the previous typology of actors is not comprehensive, in the sense that there are solutions that separately institutionalize structures of collective and corporate actors and combine these to serve complementary purposes. The prime example is the democratic *state*, which uses the associative structure of general elections, party competition, and parliamentary responsibility of ministers to control the power of a bureaucratic machinery, which is largely immunized against immediate interventions from political processes in its day-to-day operations (Scharpf, 1997: 57). At that level, state departments largely operate as a top-down organization – and hence resemble a corporate actor, with the Minister or Secretary heading the department as its 'owner'[5]. At the same time, however, this Minister is restricted by parliamentary control.

#### 2.2.5.2 Actors' capabilities and action orientations

The view on actors and their orientations within actor-centered institutionalism differs from rational choice theories such as neoclassical economics (Scharpf, 1997: 19-22). Actor-centered institutionalism avoids the extreme assumptions of neoclassical economics. Neoclassical economics (in its purest form) assumes actors to be exclusively motivated by economic self-interest (maximization of profits for firms, maximization of wealth for households). It also assumes actors to perceive

the economic environment in the same way as the researcher; to have complete information on the situation they face; and to have computational capacities good enough to select the course of action that will maximize their self-interest. But it is not realistic to think of human actors as being omniscient and single-minded self-interest maximizers who will rationally exploit all opportunities for individual gain regardless of norms and rules. So in contrast, actor-centered institutionalism assumes:

- that actors do not act on the basis of an objective reality but on the basis of a *perceived reality* and of assumed cause-and-effect relationships operating in the world they perceive;
- that they do not only act on the basis of objective needs, but also on the basis of preferences reflecting their *subjectively defined interests and valuations* and their *normative convictions* of how it is right or good or appropriate to act under the circumstances;
- that, more often than not, they will not have complete information on the situations they face;
- and that their computational capabilities are limited.

Intentional action therefore cannot be described without reference to the subjective 'meaning' that this action has for the actor in question (Scharpf, 1997: 20; 60). But actor-centered institutionalism simultaneously seeks to avoid the opposite extreme of a 'social construction of reality' (Berger & Luckmann, 1966) that ensures the convergence of cognitive orientations through social norms and institutionalized rules that shape and constrain the motivations or preferences of all participants in social interaction (Scharpf, 1997: 21-22). Actor-centered institutionalism does not see these two extremes as mutually exclusive. Human action cannot exclusively be explained by reference to cultural beliefs and institutionalized rules of appropriate behavior – people are intelligent and have views, interests and preferences of their own, which sometimes brings them to evade or violate the norms and rules they are supposed to adhere to. So the rational-actor paradigm may indeed capture the basic driving force of social interaction. Simultaneously, human knowledge is limited and human rationality is bounded, and much human action is based on culturally shaped and socially constructed beliefs about the real world. Most human action will occur in social organizational roles with clearly structured responsibilities and competencies with assigned resources that can be used for specific purposes only. Action within a role is practically impossible to explain without reference to cultural and social definitions of that role and to the institutionalized rules governing it (Scharpf, 1997: 21-22). Role definitions and self-interest maximization can therefore best be seen as two poles simultaneously shaping actor's choices; more precisely, it is the actor's *perception* of both role expectations and his self-interest maximization that drives his choices[6].

In actor-centered institutionalism actors (both individual and composite) are characterized by specific capabilities and action orientations (Scharpf, 1997: 43-44). *Capabilities* are all action resources that allow an actor to influence an outcome in certain respects and to a certain degree. They include personal qualities, physical resources, technological capabilities, and privileged access to information. As mentioned in section 2.2.4, particularly important here are action resources that are created by institutional rules defining competencies and granting or limiting rights of participation, of veto, or of autonomous decision. *Action orientations* are, roughly, the characteristic perceptions and preferences of a particular actor. They can be subdivided into three components: unit of reference, cognitive orientations and preferences (Scharpf, 1997: 60-66).

As individuals will not always act on their own behalf, but often in a representative capacity for of from the perspective of a group (family, state), it is important to relate individual behavior to the appropriate *unit of reference* on whose behalf action is undertaken and from whose perspective intentional choices can be explained (Scharpf, 1997: 61). Such role positions are associated with role-specific norms and expectations that will generally be supported by effective sanctions, ranging from social disapproval to criminal prosecution. In role-related action, perceptions and preferences will be derived from the perspective of the social unit on whose behalf the action is performed[7]. We must of course remain alert to the possibility that individual self-interest may become so important in the case at hand that explanations will fail if we do not to take them into account (Scharpf, 1997: 61). Even binding rules may sometimes be violated by actors who are willing to pay the price or who think they can get away with it (cf. Scharpf, 1997: 42).

Actors have *cognitive orientations* for which actor-centered institutionalism generally assumes that their perceptions of directly observable facts will be empirically correct and that their hypotheses about what they cannot observe as well as causal linkages will be shaped by theories prevailing at the particular time and in the particular institutional setting (Scharpf, 1997: 62-63). Actor-centered institutionalism only departs from this assumption when there are specific indications that this is not the case; then, however, it is of the greatest interest to know to what extent the available courses of action, their likely outcomes, and their impact were (in)correctly perceived. Over the course of interaction, cognitive orientations may change due to learning processes. Here, the working hypotheses are that policy-oriented learning, even if not diffused universally, is nevertheless likely to be shared in identifiable subsets of actors.

*Preferences* consist of interests, norms, identities and interaction orientations (Mayntz & Scharpf, 1995: 52-58; Scharpf, 1997: 63-66). The (self-) interest component describes the basic preference of actors for self-preservation, autonomy and growth. It is defined in a quasi-objective way. The strategic implications of self-interest will, however, depend upon the institutional environment – they are,

for example, different for firms in a highly competitive market than for a union. Normative role orientations are also defined in a quasi-objective way, relating to normative expectations facing occupants of a given position. They need not have the formal quality of legal rules, and effective sanctions may be no more than social disapproval. Norms may define either the preceding conditions of a particular action (as when they require or prohibit certain acts) or the purposes to be achieved thereby (cf. Luhmann, 1966).

There is no reason to think that either self-interest or norms should form a hierarchically integrated, logically consistent system, so we cannot rule out conflicts between the courses of action each suggests (Scharpf, 1997: 65-66). On the other hand, there will be situations for which neither provides clear guidelines; and actors have the capacity to adopt own interests and follow self-defined rules. A partial solution to this problem of indeterminate preferences is provided by the formation of a specific *identity*. Actors have the possibility of defining specific interest and norms for themselves, and may selectively emphasize certain aspects of self-interest as well as certain rules and normative purposes from among those that generally apply to their 'type'. A clearly defined identity will simplify choices (and so reduces search costs internally) and, when communicated, reduces uncertainty for other actors (and so reduces transaction costs externally) and hence tends to increase efficiency. To be effective this way, identities have to be relatively stable over time, and restrict the range of choices further than quasi-objective self-interest and norms would have done. This may come at a price when the environment becomes volatile and a high degree of flexibility is required. Changing identities implies discarding a large investment in moral commitments and cognitive certainties, which (as many a case study of firms attempting to change their corporate identity will show) is not easy. The other side of that coin is that such identities can be a powerful explanatory factor, in particular when choices are underdetermined by more general considerations of interest and norms.

Finally, there is a relational dimension to actor orientations, labeled *interaction orientations* (Scharpf, 1997: 84- 89). The standard assumption within actor-centered institutionalism as well as rational choice theories is individualism: actors are only concerned with their own gains and losses. Contrary to conventional rational choice theories, actor-centered institutionalism allows for the fact that actors are not always entirely unconcerned about the payoffs received by other actors involved. If gains to another party objectively increase or decrease the expected payoffs to one actor, there is no need to conceptualize this dimension separately: it can simply be included in the payoff specification. The concept of interaction orientations is used for subjective redefinition of the 'objective' interest constellation. A relationship may assume a character of its own for an actor that affects the valuation of 'real' gains and losses and that distinguishes this relationship from others that are objectively similar. Examples are: solidarity (gain to another actor is positively

valued), competition (another's loss is equally valued as one's own gain), altruism (own gain is irrelevant, only the others' gain is considered a positive outcome) and hostility (own gain is irrelevant, only the others' losses are considered a positive outcome).

### 2.2.6 Actor constellations in actor-centered institutionalism

After identifying the problem and interaction central to our analysis, the first step is to map out the problem as it is identified by substantive policy analyses into actor constellations among the actors involved (Scharpf, 1997: 48). The basic idea is that the solutions (as identified by substantive policy research) to a given policy problem must be produced by the interdependent choices of a plurality of actors with specific capabilities and with specific perceptions and preferences regarding the outcomes that could be obtained. Since the choices are interdependent, it is likely that no single actor will be able to determine the outcome unilaterally. What matters is the actor constellation (Scharpf, 1997: 69).

In the most general sense, anything that a person considers desirable (or undesirable) may become a policy problem if changes in the desired direction are possible in principle but cannot be achieved by that person acting alone because others are causing the problem or have control over some action resources that are necessary for its resolution (Coleman, 1990). This does not imply that all of these problems need to be resolved through *public* policy, or through any kind of supra-individual agreement (Scharpf, 1997: 69-70). They may be resolved through noncooperative or cooperative interaction among the actors involved, and in the market. But not all problems can be resolved in this fashion, and the market itself may cause problems.

Focusing on the interaction aspect of policy problems, three distinct groups of policy problems may be distinguished (Scharpf, 1997: 70-71). *Problems of coordination* may arise if individual actors would benefit from exchanging goods or services, from producing goods or services that are compatible, or from collaborating in the joint production of goods or services that neither party could produce by itself. Though individual actors should in principle be able to resolve coordination problems through voluntary agreements amongst themselves (in other words, free markets would suffice), public policy may nevertheless play a crucial role in reducing distrust and the transaction costs of such agreements, for example by defining and protecting property rights, by defining a law of contracts and a legal machinery for the enforcement of contractual obligations, and by defining technical standards that ensure the compatibility of products. *Externalities* and *collective goods problems* may arise if individual action produces negative or positive effects for others that will be disregarded by purely self-interested actors. It may result in a 'Tragedy of the Commons' (Hardin, 1968), in which common resources are exploited and ultimately

destroyed by rational self-interest seeking actors. If property rights are well defined, and if external effects are concentrated on small numbers of other actors, contract law may permit satisfactory solutions to be reached through negotiations. As the number of affected parties increases, however, negotiated solutions will incur exponentially rising transaction costs. Public policy could intervene to correct externalities through regulation or by imposing incentives, or collective goods, or to produce collective goods through organized collective action or through public provision. *Redistribution problems* may arise under two conditions. First, there may be situations in which (otherwise attractive) policy purposes can only be attained at the expense of identifiable individuals or groups. Here, the issue will necessarily have to be resolved in the policy process. Second, the existing distribution of assets may itself become a policy issue. Societies differ greatly in the extent to which (market-generated) inequalities are made a policy issue; but in each of them, the state's power to tax and regulate is at least to some extent used to help the weak.

The concept of actor constellations serves two purposes (Scharpf, 1997: 45). First, it allows us to describe and compare, at a very high level of abstraction but with great precision, extremely diverse real-world constellations, and the ways in which the actors diverge or converge in their preferences over the range of feasible outcomes. Second, it provides the crucial link between substantive analysis and interaction-oriented research. It is important to realize that (policy) interactions usually do not take place among the (individual) actors that are ultimately affected but among specialized actors. A particular policy problem could be described in game-theoretical terms; but the substantive policy problem then will have to be mapped onto the constellation of policy actors involved. This will never be a perfect one to one representation, as the policy process will ultimately deal with problems that differ from the substantive problems at the societal level (Scharpf, 1997: 45-46). In translating policy problems into actor constellations we need to show how particular actors with specific orientations and capabilities will or will not include societal interests in their own action orientations (Scharpf, 1997: 72).

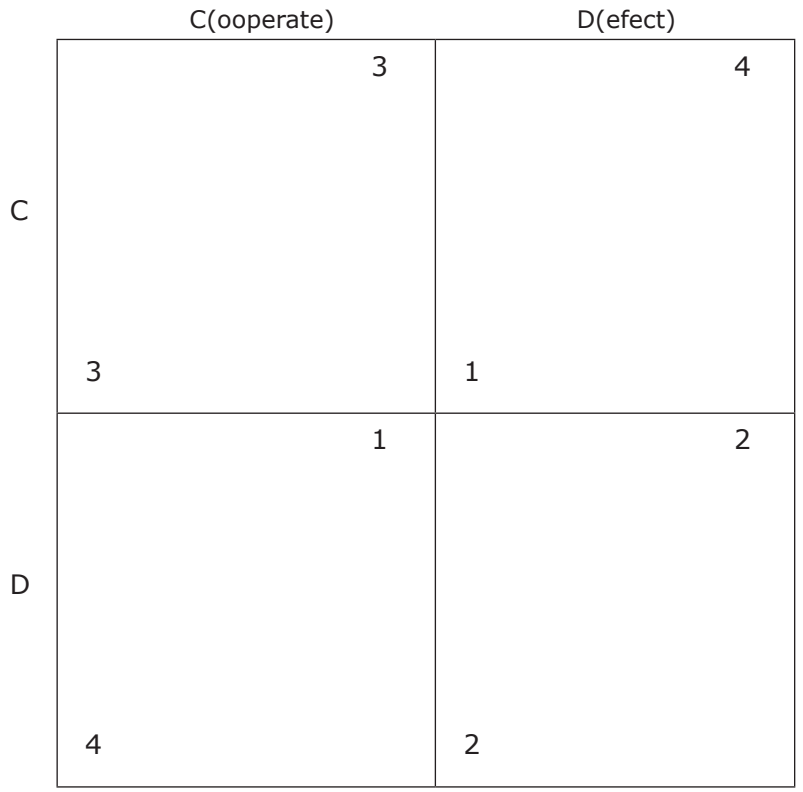
Actor constellations are meant to represent what we know of the set of actors that are actually involved in particular policy interactions – their capabilities (translated in potential strategies), their perceptions and evaluations of the outcomes obtainable (translated into payoffs), and the degree to which their payoff aspirations are compatible or incompatible with one another (Scharpf, 1997: 72). Scharpf (1997) emphasizes the potential of the analytical power of game matrices to portray actor constellations. One important distinction is between *noncooperative* and *cooperative* actor constellations or games. A cooperative game is one in which binding agreements among the actors are possible before they choose their strategy (Scharpf, 1997: 8). For noncooperative games, one must first distinguish between *simultaneous* and *sequential* games. In a simultaneous game, each actor must

select his strategy before knowing the strategy choice of the others. In a sequential game, however, one player must choose first, and the next will proceed in the knowledge of that choice (Scharpf: 9).

Scharpf (1997: 73) argues that the theory of noncooperative games can help us in identifying potential equilibrium solutions even when we know that in fact modes of interaction such as negotiations or voting are used, because they define the 'logic of the situation'. The most simple noncooperative game constellations are those of *pure conflict* (one side must lose what the other side gains) and of *pure coordination* (all actors can maximize their own payoffs by agreeing on concerted strategies) (Scharpf, 1997: 73). Both are rare in the real world as compared to so-called *mixed-motive* (or variable sum) games in which the preferences of the players are partly harmonious and partly in conflict. Four archetypical mixed-motive games are: 'Assurance', 'Battle of the sexes', 'Prisoner's Dilemma' and 'Chicken'. Each involves two players, who can each choose between two strategies (cooperate or defect), resulting in four possible outcomes that can be ranked 1 (low) – 4 (high) to the payoffs for each of the players.

The most famous of these games is the 'Prisoner's Dilemma', the game matrix for which is presented in figure 2.3. It is exemplified by two robbers caught red-handed and each locked up in a separate cell, unable to communicate. The district attorney offers to reward each of them with a reduced sentence for confessing unilaterally. If one confesses and the other doesn't, the latter gets the maximum sentence, while the 'rat' gets the mildest sentence. Jointly, they would be best off by cooperating (which here means: not confessing), for then each gets the second best payoff. The 'tragedy' here is that for each them, regardless of what their partner does, they will be better off by defecting (confessing); it is the 'dominant' strategy (Scharpf, 1973). So the expected (equilibrium) outcome is not the welfare-superior one: they will both be tempted into confession.

Figure 2.3: Prisoner's dilemma game matrix




*Source: Scharpf (1997), p. 75*

### 2.2.7 Modes of interaction

Actor constellations describe the level of potential conflict, but do not yet include information about the *mode of interaction* through which that conflict is to be resolved (Scharpf, 1997: 72). There are four basic modes of interaction: 'unilateral action', 'negotiated agreements', 'majority vote', and 'hierarchical determination' (Scharpf, 1997: 46).

These modes of interaction are shaped by institutional rules regulating their use, for instance, the procedures according to which issues can be brought to a vote (Scharpf, 1997: 46). But they are also affected by the larger institutional context in which they are used, even to the extent that there may be a limited variety of institutional arrangements that *minimally* permit a specific mode of interaction to be employed (Scharpf: 46). It is assumed that modes of interaction differ in their demand on the institutional capacity for conflict resolution and that institutional structures differ in their capacity to support different modes of interaction (Scharpf:

47). 'Unilateral action', for instance, requires minimal institutional support, as it can even be undertaken in a completely anarchic field. 'Majority voting', however, requires identification of the voters (a group), the establishment of voting procedures, and some way of ensuring that the outcome of the vote is put into effect. Majority voting cannot be the mode of interaction in anarchic fields, as it requires more substantial institutional support[8]. If the institutional context is an organization (a corporate actor or an association), however, all four modes of interaction may apply to actions of their members. A manager, for instance, will sometimes be acting unilaterally (e.g. deciding to lay-off a worker); he may be negotiating an agreement (e.g. on the details of a merger of his department with that of a colleague; he may have been voting in the board of managers (e.g. on the merger proposal before); and he may be acting out a direct order from a superior, or give a direct order to a subordinate. Also, the same mode of interaction may change its character within a different institutional context. Negotiations, for instance, will have a limited problem-solving capacity in a minimal institutional context, which lacks sanctions to ensure that agreements reached will be kept; they will have more chance of success when, for instance, they take place in an environment where there is a state that has come up with a law of contracts, and a system of law enforcement to ensure compliance.

To show how and why separately distinguishing modes of interaction matter for the analysis, it is helpful to see how these different modes of interaction lead to a different dynamic in the analysis of the Prisoner's Dilemma. Unilateral action was the assumed mode of interaction in the previous discussion of the Prisoner's Dilemma: there were no rules allowing for interaction, and each prisoner could only act on his own.

Allowing communication would change the mode of interaction to 'negotiated agreement'. Sometimes it is suggested that the dilemma would cease to exist if the prisoners were allowed to communicate, for rational self-interested actors would agree to cooperate rather than confess. Scharpf (1997: 76) correctly points out that in a noncooperative game such as the Prisoner's Dilemma (and as would be the case in the anecdotal version in which it is depicted) such agreements would not have any *binding* force. In the absence of binding agreements, communication would remain 'hollow talk' that cannot eliminate the possibility of mutual defection, particularly in the light of substantial stakes such as long-term jail sentences.

Axelrod (1984) has shown that the dilemma may indeed be solved if this game is played as a sequential game. If the game is repeated between the same actors, each player can reward or punish the previous move of the other. Axelrod has shown that if both players then employ this sanctioning capacity in 'tit-for-tat' strategies (a previous defection by the other is punished by your own defection in the next round, while previous cooperation is rewarded), rational self-interested actors are in fact able to achieve stable cooperation in an (indefinitely) reiterated two-person Prisoner's Dilemma.

But if the number of actors is more than two, the tit-for-tat solution ceases to work (Scharpf, 1997: 76). The most important reason is that in that case, the next interaction will almost certainly not be with the same actor as the previous one – meaning the sanction cannot be applied to the culprit. Here, the dominant strategy for each individual actor is still defection. In the social sciences, this is known as the problem of 'free riding', that, if adopted by all participants, must lead to suboptimal outcomes in the production of public goods (cf. Olsson, 1965; Hardin, 1968). In order to stabilize cooperation in multi-actor Prisoner's Dilemma constellations, noncooperative games will not be enough. What is needed are structures and processes of interaction that permit the adoption and enforcement of collectively binding decisions (Ostrom, 1990; Ostrom et al., 1994).

When binding agreements are possible, agreement in the Prisoner's Dilemma seems easy – at least in the theoretical model, as rational actors would agree on cooperating (i.e. not confessing). Scharpf (1997: 77), however, correctly notes that this Prisoner's Dilemma matrix offers a rather extreme assumption. Real-world constellations often allow for not one but several cooperative solutions that may differ significantly in their distributive consequences. In that case, the common aversion to the outcome associated with mutual defection is not necessarily sufficient to ensure agreement on one of the competing cooperative solutions. Peace talks such as those in Northern Ireland or in the Israeli-Palestinian conflict show that conflicting ideas over the content of a negotiated settlement may long frustrate a settlement even if both parties want peace desperately.

By contrast, when decisions can be taken by majority vote or by hierarchical rule, outcomes will be reached much more easily (Scharpf, 1997: 77). However, now the danger is exploitation: whoever is able to impose his preferred solution will be tempted to choose maximizing his own self-interest at the expense of the other(s), over the welfare-superior outcome which implies his second-best payoff, as well as the other's[9].

## 2.3 Markets for intermediate skills

### 2.3.1 Introduction

Having introduced the actor-centered institutionalist framework, it is time to link it to the research topic at hand: the operation of markets for intermediate skills, and the regimes that govern them. At first glance, the problem at hand is a typical coordination problem. Young people need skills training in order to acquire (attractive) jobs, and they need someone to teach them these skills. In this vital sense, markets for intermediate skills are part of the general problem each society has to solve in how to educate and socialize its youth.

As we saw in section 2.2.6, individual actors should in principle be able to resolve

coordination problems through voluntary agreements amongst themselves; in other words, contracts concluded in free markets would suffice. But public policy may nevertheless play a crucial role in reducing distrust and transaction costs of such agreements. And externalities and collective goods problems as well as redistribution problems may arise that enhance the call for public policy to combat such problems. Section 2.3.2 will discuss education markets, the extent to which they may give rise to the aforementioned problems, and the extent to which contemporary economic theory sees grounds for public education policy.

Section 2.3.3 will then direct the discussion from education markets in general to markets for intermediate skills in particular. One important distinction between markets for intermediate skills and general education markets is that there are different organizations that can provide these skills. While general education is offered through (public or private) schools, it is not just schools that provide VET training: firms themselves are responsible for possibly the majority of skills acquisition in our societies.

That simple fact significantly alters the discussion of the potential role for public policy in this area: why would firms and (future) workers not be able to meet each other's demands (for qualified workers and relevant skills with matching jobs, respectively) in a 'free' market? Section 2.3.4 discusses this particular question, starting with Becker's famous human capital theory (Becker, 1993), and resulting in the assertion that externalities (and, hence, prisoner's dilemma type constellations as analyzed in actor-centered institutionalism) are keys to markets for intermediate skills.

Section 2.3.5 will discuss relevant aspects of labor market theory, which are particularly relevant when analyzing training, skills and qualifications. It starts with an analysis of the concept of qualification. It continues with an analysis of the reasons why labor markets are not as competitive as one may think. The specialization which vocational education and training causes is one reason, and geographical boundaries another. In addition, it is the very existence of firms, and the longer-lasting relations between most workers and their firm, which makes the labor market one in which the governance mechanism *market* is not the only one. Firms themselves govern an internal labor market, which implies that *hierarchical* governance significantly intervenes with the operation of (external) market mechanisms. This is reflected in labor market theory by the distinction between internal and external labor markets.

Section 2.3.6 focuses on the connection between education and labor markets. It first discusses the concept of the school-to-work transition. It subsequently discusses the differentiation of both education systems and labor markets, and mismatches that may arise between education and labor. And it concludes with a discussion of governance regimes, actors, and specific types of institutional configurations that can strengthen the link between education and labor.

Section 2.3.7 discusses national differences in markets for intermediate skills in general, and between the Netherlands, Germany and the U.S. in particular, based on available international comparative statistics.

Section 2.3.8 will extensively discuss a body of qualitative comparative research at the firm level. The reason to discuss it so extensively is that it provides a much better grasp of the connection between work organization, firms' human resources, and training policies than statistics do. It reminds us, first, of the importance of including the sector level into the analysis. Amount and quality of training are related to production requirements, and these will obviously differ between sectors. Focusing at the sector level controls for that factor. Second and even more importantly, however, these studies show remarkable differences in work organization, human resources and training policies between similar firms in different countries. This fundamentally rules out the naïve idea that production requirements would simply dictate one unilateral type of work organization and (therefore) skills patterns. It also attunes us to relevancy of the relations between work organization, the institutionalization of education and training and firms' skills strategies.

As such, this section will pave the way for the introduction of the concept of skills equilibriums in section 2.3.9. Skills equilibriums are the final concept for the analysis of markets for intermediate skills in this book: a specific type of equilibrium concept used to label and analyze such markets.

### 2.3.2 Education markets

Scientific interest in the market as a coordination mechanism goes back as far as 1776, to the work of Adam Smith (1975). The market is the place where supply and demand meet, and result in coordination as if through an 'invisible hand' (Smith, 1975) rather than through a great deal of (state) regulation. The hand, however, is not that invisible: it's the price mechanism. As Holton (1992: 61) puts it:

> "The essential feature of the price mechanism is its capacity to regulate and bring into equilibrium the demand for and the supply of commodities. The behavior of prices (…) gives both information and incentives to producers and consumers. Producers will be guided in their decision about what to produce and how much to produce by the demand for commodities as expressed through the price mechanism. Similarly, consumers will be guided by decisions about what to consume and how much they can afford to consume through the price mechanism. What matters (…) is the relative cost and benefit involved in different courses of action as expressed through the relative prices of different commodities. (…) If the demand for a particular commodity is considerable but the supply highly limited, prices will tend to be high relative to other commodities. Such a situation gives producers

> an incentive to seek cost reductions in order to lower prices and secure greater profits from the ensuing switch by consumers to cheaper versions of the same product. Alternatively, the same initial situation gives consumers the incentive to look for substitutes for the original expensive commodity. If a cheaper substitute can be found, the lower price gives consumers an incentive to switch to the alternative product."

In principle, markets could in this way lead to an optimal production and distribution of goods and services. Not all goods and services, however, can be adequately supplied by the market. There are two important requirements regarding their nature: excludability (is it possible to exclude persons, who do not pay the price, from consumption) and rivalry (does my consuming one unit imply that there is one unit less to consume for others). Smith (1975) himself recognized so-called 'duties of the sovereign' that do not meet these requirements, such as national defense; nowadays we would call them collective goods. Goods that do meet both requirements are called private goods.

While there are claims that education is a collective good, the *communis opinio* is that education is a private good. In an exploration of education markets, the Dutch Education Council argues that individuals can be excluded from education, and that there is rivalry in the sense that a teacher's attention to one student does not go to the others (Onderwijsraad, 2001a: 21). While we agree that education can best be analyzed as a private good, both these arguments are not as convincing as they may appear. First, to the extent that most societies have a basic education system combined with compulsory school attendance, excludability becomes a moot point, empirically, as far as using it to establish the private or collective nature of the service: while it of course remains theoretically possible to exclude individuals from consumption, it empirically becomes irrelevant for the part of the education system where government policy actually forces consumption upon its youth and their parents[10]. Second, while one may indeed characterize a good or service as excludable or not, characterizing them on rivalry requires a gliding scale. If someone eats my chocolate bar it's completely gone. But if a teacher teaches my fellow student how to add and subtract, he can still teach me – and, possibly, simultaneously.

In the end, it is not the characteristics of the good per se that by definition make it private or collective; it is the specific institutionalization of its provision in a particular society that matters. From a sociological perspective, markets themselves are in fact institutions. Hodgson (1988: 174) defined the market as a set of social institutions in which a large number of commodity exchanges of a specific type take place regularly, and to some extent are facilitated and structured by those institutions. Exchange involves contractual agreement and the exchange of property rights, and the market consists in part of mechanisms to structure,

organize and legitimize these activities. Hodgson points out that some institutions within the market are associated with exchange and contracts in an elemental sense (such as the legal system and the customs, which govern the contract), and would be present even if a formal market did not exist. In fact, such institutions are considered crucial for the historical emergence of markets as coordination mechanisms over the last few centuries; in particular the institutionalization of private property rights, giving individuals or organizations effective control over economic resources, is considered a primary factor behind this (North & Thomas, 1973). Other institutions are specifically concerned with the development of the market and the coordination of a large number of exchanges in an organized manner. Furthermore, there is the 'embeddedness' of markets in the wider social context; Granovetter (1985: 481-482) has argued that (economic) behavior and institutions are so constrained by ongoing social relations, that to construe them as independent is a serious misunderstanding. Analyzing markets without an eye for their institutionalization would be as misguided as analyzing 'systems' without an eye for the operation of market mechanisms, even in state-dominated sectors such as defense. The question whether a good is private or public is therefore, in the end, irrelevant. Market mechanisms and (other) institutions (some, but not all, created by the state) will always jointly influence provision and consumption; and their precise interplay should be empirically established for each individual good or service in each individual country (or even region thereof). The reason that we prefer to treat education as *in principle* a private good is that this explicitly leaves open the alternative of market provision, which is particularly important in markets for intermediate skills, as we will see. Vice versa, treating education as a private good does not rule out a (large) role for the state.

Economic theory poses various requirements to guarantee maximum efficiency through market provision of private goods (Onderwijsraad, 2001a: 18-19), most of which are not met in education markets (Onderwijsraad, 2001a: 19-20):

- competition is often limited to those suppliers meeting various government requirements; (in particular state sponsored) suppliers are often not completely free to determine their service, use production means, and set prices, but are constrained by government requirements in each respect;
- consumers are usually subject to compulsory participation in subsequent, specified types of education up to a certain age, and thus are not completely free in their choice;
- consumer choice is often further limited by the limited number of local suppliers; since transaction (in particular transportation) costs increase relatively fast with distance from the supplier, local suppliers have a distinct competitive advantage over others;
- education is an 'experience good', meaning that quality often only becomes apparent during consumption, rather than being satisfactorily determined up

front through its price; transaction costs of switching suppliers are relatively high as one often cannot get full credit at the new school for education completed at the previous one;
- the state often pays suppliers (to a large extent) directly from tax funds; remaining further prices for individuals are often also set (and reimbursed) by the state, and do not cover the costs of related consumption.

Education markets are thus generally considered quasi-markets (cf. Le Grand & Bartlett, 1993; Woods et al, 1998), and the fact that not all theoretical criteria for optimal market operation are met may result in market failure. This in turn may induce state intervention. There are two main arguments for state intervention in markets in general and education markets in particular (Onderwijsraad, 2001a: 21-23). The first is efficiency: the state may intervene to achieve 'optimal investment' in a market. Two situations can be pointed out where investment can be less than optimal. The first is the existence of external effects: effects that go beyond the individual benefits of the good or service. As individuals will base their consumption solely on the individual costs and benefits it will present them with, the threat is that the market by itself may result in lower investment levels than is considered desirable from a collective point of view. The second situation that can lead to less than optimal investment is uncertainty on the returns to investment. This may either make consumers themselves (or capital providers that they need for loans in case they lack the necessary investment means themselves) more risk averse than is desirable. The second main argument for state intervention with markets is equity. Again, there are two situations that may lead to less equity than is considered desirable. First, individuals may not have equal access to (essential) goods or services. Second, the market may not provide what is considered necessary for each individual, as individuals may not value a particular good or service (so-called 'merit goods', cf. Barr, 1998) enough as they would be wise to do.

These four specific arguments all more or less apply to education (Onderwijsraad, 2001a: 21-23). First, while hard evidence is hard to find, the general estimation is that education contributes to economic growth as well as other societal goals such as social cohesion and democracy (cf. Oosterbeek, 1998). If consumers do not take these external effects into their individual cost-benefit analysis, state intervention may be required to achieve a both quantitatively and qualitatively adequate level of education investments (cf. Groot & Maassen van den Brink, 1995). Second, the individual benefits of education are not known up front, which may make either consumers themselves, or capital providers they turn to for loans, risk averse regarding education investments, an additional reason why market-generated education investments may be lower than states want. Third, the inclination to invest in education in the first place is positively correlated with family factors, while different attainment levels in the education system are positively correlated

with subsequent income differences later on. Governments may therefore want to intervene to make education participation and/or future income distribution more equal. Fourth and final, some individuals (or their parents) may underestimate the value of education, and governments may paternalistically want to intervene to ensure each individual participates to a required minimum level; education can easily be seen as a merit good (cf. Barr, 1998). For all these reasons, government intervention tends to be more pronounced in education markets than in most other markets.

### 2.3.3 Markets for intermediate skills

While it is hard to argue against state intervention with education systems in general, this does not necessarily imply that states should intervene with each particular segment of the education system, much less that they should do so in the same way. Our modern societies require all of their citizens to be able to read, write, and calculate; and (general) educational achievement is a powerful predictor of future labor market prospects and earnings. Both the external effects and the 'merit good' nature of education is therefore most easily demonstrated for primary and (lower) secondary education, which is why school attendance is compulsory at these levels. While there is no compulsory university attendance, states also intervene in university education. Even in the U.S., where there is an abundance of private universities and colleges, states fund their own public university systems. Important arguments for government intervention in university education are the fact that a university education should not be exclusively available to those who can foot the bill themselves, and the importance of published academic research for the accumulation and dispersion of knowledge throughout society.

Vocational education is somehow stuck in between the bottom (primary and lower secondary general education) and top (tertiary education at universities) of the education hierarchy in our society. It is located at the upper secondary or tertiary level in education systems; and it may be organized as a separate segment within education systems with a separate type of schools primarily dedicated to this task (as is the case in the Netherlands and Germany), or it may be included as an option offered by schools that primarily offer general education (as is the case in most American high schools). This alone makes it harder to demarcate clear boundaries of VET markets than those of either primary and secondary general education or university education.

But a more important cause of this demarcation problem is that, while there is no adequate functional equivalent to general education at (public or private) schools at the primary, secondary, and tertiary levels, there is one for school-based vocational education: work-based training provided by firms. While an analysis of markets for general education can limit itself to schools on the supply side and

students (and their parents) on the demand side, an analysis of VET markets will have to incorporate firms on both the supply and the demand side. On the supply side, because a lot of workers' skills are actually acquired in the workplace, through formal training or informal learning on-the-job. And on the demand side, because it is not just the workers themselves (in terms of higher wages), but also firms that benefit (in terms of higher productivity) from skills their workers have previously acquired through VET. Obviously, firms also benefit from general skills such as reading and writing, which their workers have acquired in general education. But general education and the skills taught there serve more causes than just an adequate operation of the labor market, and it is not as specifically targeted to firms' needs as VET is. And as firms are, in principle, perfectly capable of teaching VET skills themselves, this provides states with an alternative to state-sponsored school-based provision of these skills that does not exist for general skills: leaving it to firms themselves.

The important role of firms on both the supply and the demand side of VET means that it is located at the crossroads of two larger markets: the education market and the labor market. Rather than to speak of vocational *education* and training markets, we prefer the term market for intermediate skills: those above routine skills but below professional ones, implying that the category of intermediate skills is still heterogeneous in content and imprecise in its boundaries (Ryan, 1991: 2). Ryan (1991: 2-3) traces back the relevancy of intermediate skills for economic performance to three distinctive attributes. First, they are costly to develop, which distinguishes them from routine skills. Second, they are transferable across employers, which is what distinguishes them from firm-specific skills. Third, they have traditionally been developed predominantly through workplace-based training programs. It is in fact the combination of the first two characteristics that explains why markets for intermediate skills (and the role the state has to play there) have attracted significant attention from scientists and policy-makers: costly transferable skills are the ones for which market failure is liable to be the most serious (Ryan, 1994: 3).

### 2.3.4 Firms and their training investments

#### 2.3.4.1 Becker's human capital theory

The fact that costly transferable skills are the ones for which market failure is liable to be the most serious, is a hypothesis that deserves closer scrutiny. As firms need new, adequately skilled workers, and young people need skills training, why would a 'free' market, with new labor market entrants seeking training and firms offering it, not simply solve this coordination problem?

The seminal work in economic theory on firms' training investments has been

Gary S. Becker's 'Human capital' (Becker, 1993; first published 1964). Economic theory assumes profit-maximizing firms to be in equilibrium when marginal receipts equal marginal expenditures, or, in symbols when marginal products (MP) at a particular point in time (t=0) equal wages (W). Training might lower current receipts and raise current expenditures, yet firms could profitably provide training if future receipts were sufficiently raised or future expenditures sufficiently lowered because of it (Becker, 1993: 32). Training not only costs money in the sense of trainer's pay and learning materials (what Becker calls the outlay on training), but also entails opportunity costs because trainees spend time in training that could have been used to produce current output. The general rationale for firms to invest in training is captured in the equation MP0' + G = W0 + C where G (the excess of future receipts over future outlays) is a measure of the return to the firm from providing training, C is the sum of opportunity costs and outlays on training, and MP0' stands for the fact that the current marginal product will actually be lower than it would have been if the trainees had not been trained but had been working productively full-time (MP0) (Becker, 1993: 33).

Becker distinguished between two types of firm-provided training: general versus specific training. Perfectly general training would be equally useful in many firms; completely specific training has no effect on the productivity of trainees that would be useful to other firms. Becker (1993: 40) realized that much training is neither completely general nor completely specific, but nevertheless chose for a sharp demarcation between these two categories. Training that increases productivity more in the firms providing it than in other firms is specific training, whereas training that increases productivity by at least as much in other firms is general training.

Becker (1993: 40) correctly noted that workers, not firms, command the property right for their skills, as a skill cannot be used without permission of the person possessing it. As this `human capital' has feet and is free to walk, firms' investments in it are liable to a certain risk: workers may leave before the firm has recouped any investments in their training. As general training is useful in many firms, marginal products would rise by the same extent in all of them because of it. A firm that does not train itself could therefore offer another firms' trainee the same wage as the training firm itself, without having had to spend outlays on training itself, and without incurring opportunity costs of missed production time from workers in training. Becker concludes that firms providing their training could not capture any of the return. No firm would be prepared to invest in general skills training, since after training, either the firm pays its workers the market wage (in which case it would be cheaper to directly recruit already skilled workers from the external labor market rather than train your own), or the firm pays its trained workers less than the market rate, in which case they workers will quit and seek similar employment elsewhere at the market wage (cf. Soskice, 1994: 29). The problem here is what

economists have tended to call 'poaching' and sociologists 'free riding': some firms may opt not to train themselves, but settle for recruiting trained workers from other firms. The imminent threat is a 'Tragedy of the Commons' (Hardin, 1968), in which common resources (here: the supply of skilled workers) are exploited and ultimately destroyed by rational self-interest seeking actors (here: firms that prefer to recruit trained workers from other firms rather than train them themselves). The tragedy here threatens to be that, as firms that train will not always be able to amortize the training costs and recoup the benefits (by retaining their trained workers), the long term equilibrium result would be that no firm would invest in general training.

Becker immediately finds a solution for this potential problem, however, as he concludes that firms will thus only provide general training to the extent that the trainees would bear the costs of general training, and profit from the return. They would be willing to pay these costs since training raises their future wages. But the initial price they pay for this is that the wage of trainees would not equal their opportunity marginal product (the marginal product in case they would be working full-time rather than spending some time in training) but would be less by the total costs of training: workers, in other words, pay for general training by receiving wages below what they could receive elsewhere. The basic notion underlying this solution is the same one we saw in our discussion of the private or public nature of education (cf. section 3.2). A Tragedy of the Commons will occur if a good is truly collective; but skills that workers command are not. Property rights in skills are automatically vested, for a skill cannot be used without permission of the person possessing it. Workers' skills are excludable and rival: if a worker makes his skills available to one employer, that employer's competitor will not be able to benefit from them. The basic freedom of labor in our societies guarantees workers they can use this property right freely to their discretion[11].

As regards specific training, however, the situation is different. The wage that an employee could get elsewhere would be independent of the amount of specific training he had received. An employee who paid for his own specific training and was laid off would suffer a loss because he would not find an equally good job (that is, one in which he is paid for his specific skills investment) elsewhere. No rational employee would therefore invest in his own specific training, Becker concludes. If he were to invest in training, we would add, he would be wise to invest in general training rather than in specific training for which he would find only one employer willing to pay extra – because that one employer then would have monopoly power over that specific skills and would therefore not have to pay the full extra, if any at all. Becker therefore initially stipulates that firms would be willing to invest in specific training themselves. As this type of investment in a worker's productivity would not raise his productivity in other firms, firms will be able to reap the benefits of specific training investments themselves.

In its simplest form, Becker's theory shows that firms should be willing to invest in specific skills and reluctant to invest in general skills. As long as we assume perfectly rational actors that have perfect information about future returns to training investments, there would be an optimal equilibrium where individuals acquire exactly the kind of general training they want, and (predominantly) firms would ensure the specific training they need. The existence of considerable skills mismatches in modern labor markets indicates that this equilibrium is rarely achieved in the real world. So we need to look for an improved theory that more adequately represents what happens in real labor markets.

Becker himself already offers an important suggestion to refine the analysis. On the one hand, Becker (1993: 44) suggests an `ultimate step' to his analysis of specific training in which firms would shift some costs of specific training as well as some returns from it to workers, in order to bring supply and demand for training more in line. On the other hand, Becker (1993: 91-94) acknowledges that the idea of individuals sufficiently investing in general education is more problematic in practice than in the core version of human capital theory presented above. First, there is considerable uncertainty regarding the returns from such investments (Becker, 1993: 91-92). There is uncertainty over the length of life (the older one gets, the higher the return from an investment can be); there is uncertainty over one's abilities, particularly among younger people; and there is uncertainty over the returns because they depend on numerous events that are not predictable (e.g. future wage levels in different occupations). Second, there is the problem of financing human capital investments (Becker, 1993: 92-94). Financing human capital investments may prove more difficult than tangible capital investments, and appears to be so in practice. The traditional explanation for this is that human capital, contrary to intangible capital, cannot be offered as collateral for a loan. The more expensive the investment (e.g. a college education), the more affected it would be by this fact. Another implication is that, given the difficulties in acquiring capital from external sources, internal financing would be common, and consequently richer families would tend to invest more than poorer ones. Becker himself, however, doubts that this traditional explanation for the difficulty of financing human capital investments is the right one, because the same obstacles could apply to tangible capital investments, in particular for young people with an unproven track record as an entrepreneur. As most human capital investments are made by people who are younger than those investing in tangible capital, another reason to explain underinvestment in human capital has been that younger people will typically be less aware of their abilities and of attractive investment opportunities and will therefore be more likely to err in their investments. Becker, however, stresses the fact that human capital investments are more costly to postpone, because early investment means one can collect the return over more years (cf. Becker, 1993: 91). While postponing investments is generally a good way

to gather more additional knowledge about the return from the investment and possible alternatives for it, human capital investments would be made earlier and presumably with less knowledge than other investments (because of the cost of postponing) and would therefore be more likely to err.

Becker (1993: 22) himself points out a possible solution for the financing problems with human capital provision: government loans. As governments are in fact active in promoting human capital investments by both individuals and firms, it seems necessary to include other, macro-level actors, and the rules that govern them as well as the rules that they set themselves, to understand and explain (firms' and individuals') training investments; and this is in fact one of the main themes in this book. We will continue this avenue later in this section. First, we will propose an alternative training concept to the bipolar pair of specific versus general training as developed by Becker.

#### 2.3.4.2 The concept of transferable training

It is debatable whether labeling training as *either* (completely) general *or* (completely) specific is an adequate representation of most training that occurs in the real world. While this distinction is analytically helpful, as shown by the abundance of human capital theory that has developed in Becker's wake, most training in reality will actually occupy a middle position between both extremes. Hardly any training is either equally relevant for all firms, or only relevant in one firm. To be sure: Becker (1993: 40) himself was aware of this, and proposed to analyze such training as a composition of two components: one completely general, the other completely specific (Becker, 1993: 44).

Training that exclusively provides skills that are exclusively relevant for the training firm seems to be an exceptional case. Most skills workers acquire - even those they acquire through informal on-the-job learning rather than formal training - will usually be at least somewhat relevant in at least one other firm – such as the direct competitor of their current employer. Likewise, it seems just as hard to imagine *on-the-job* training that is *purely* general. Even if the explicit purpose of such training would in fact be to supply purely general skills, workers will very likely pick up some relevant but purely firm-specific skills –for instance, learn which of their colleagues they had best turn to for advice. When an experienced worker quits, an outside recruit with exactly the same general skills will still need some time to pick up these firm-specific skills, and thus will not instantaneously provide a full equivalent. How relevant such firm-specific skills are, will depend upon the specific nature of the job.

Stevens (1994a; 1994b) reformulates the Becker model, transforming the dualism of general/specific training to a contrast between the extreme of completely general training, and a continuum of types of training distinguished by the extent

to which the training is transferable to other firms. She proposes the concept of transferable training as the basis for this continuum. Transferable training is defined as 'training for skills which are of some value to other firms, but for which there is no presumption of perfect labor market competition' (Stevens, 1994a: 408). Thus, the other extreme, completely specific training, corresponds to no competition (for this skill) in the labor market (Stevens, 1994a: 408), implying that training becomes transferable as soon as training is of some use to a least one firm besides the training firm (Stevens, 1994b: 540; 557). General training is training for which there is perfect competition in the labor market (Stevens, 1994a: 408), which requires that 'the external market is very large' (Stevens, 1994b: 557).

With (completely) general training, it is usual to presuppose a perfectly competitive labor market – and according to Becker, individuals would themselves bear the costs of general training. With completely specific training, we have a situation of pure monopsony, as there is by definition no competition for a skill useful to only a single firm; and, as Becker has shown, firms would pay for such training. In both cases, (poaching) externalities would not arise. If we would follow Becker in analyzing training which is neither completely general nor completely specific as consisting of both a general and a specific component, we might again conclude that externalities would not arise (Stevens, 1994b: 539-540). Stevens' reformulation of the Becker model, however, shows that the concept of transferable training leads to a different conclusion. With transferable training, we should explicitly consider the possibility that the labor market is not perfectly competitive. Stevens (1994a: 408) notes that 'training may be regarded as a process which differentiates workers, and restricts the set of potential employers to those who require his skills', and that therefore her 'approach is a natural one' (as compared to the Beckerian typology of two extremes). The consequence is that 'there is a natural link between training and imperfect competition, in that the acquisition of skills, and skills requirements, differentiate workers and firms' (Stevens, 1994b: 557). There are two ways to conceive of this. Either there is oligopsony (some but not perfect competition due to a limited number of competitors), and/or competitors have differentiated skills requirements, meaning that the skills of a particular worker will have a different value for each of them (Stevens, 1994b: 540). In addition, Stevens' points to the fact that a lack of worker mobility (caused by high costs of moving house, and family attachments) will further restrict the effective level of competition: even if their skills themselves would be very general, the set of employers considered will usually be reduced to a particular region (Stevens, 1994b: 541). We will have more to say on imperfect competition in general and, specifically, the role of training in this, in the next section.

For our purposes here, we need to explore the borders of the concept of transferable training a little further than Stevens (1994a, 1994b), who was specifically interested in *on-the-job* training, which is of value to a *small* number

of firms, and used the concept for this category. We argue that her concept is an appropriate analytical category to serve as the basis for an analysis of *all* VET. Key to her analysis is the limited competition for vocational skills; as (school-based) vocational education entails specialization just like on-the-job training does, the scope of the concept of transferable training can easily be expanded to cover all VET – rather than just on-the-job training.

So we may indeed consider Stevens' concept of transferable training as the ideal starting point for an analysis of all VET. In a nutshell, the advantage of the transferable training concept is that it focuses on the gray middle of training that contains general as well as specific elements, and thus provides the opportunity to base the analysis of the extreme poles (purely specific and purely general training) upon a single foundation. One clear advantage is that we now have one training concept that adequately corresponds with the scope of markets for intermediate skills (as outlined in section 2.3.3), and hence can cover the entire range of vocational education and training – not just on-the-job training. Second, while in the simplest and most extreme version of Becker's analysis externalities (negative or positive effects for others that will be disregarded by purely self-interested actors) would not arise (cf. 2.3.4.1), the concept of transferable training makes externalities an apparent threat for all training, save the extreme case of training solely relevant for one individual firm. As long as a skill is transferable, both worker and training firm are uncertain about if and how long the worker will remain with the firm after training; and imperfect competition in the labor market may enable 'poaching' firms to pay a wage less than the marginal product - thus capturing part of the total expected return to the training investment done by the *other* (training) firm. This means that joint return of training to the worker and training firm may be smaller than the social return (which includes the return to the poaching firm); in other words, there is an externality associated with transferable training, which may lead to underinvestment (Stevens, 1994b: 541). Stevens demonstrates that any source of imperfect competition leading to wages below marginal products, combined with any uncertainty about labor turnover, gives rise to this externality. It only disappears for training which is either perfectly general or perfectly specific (Stevens, 1994b: 542); but such cases are the exception, rather than the rule, as was the case in the original Becker model.

This way, Stevens' analysis helps us to show one of the key elements in our previous definition of markets for intermediate skills (cf. section 2.3.3): costly transferable skills are the ones for which market failure is liable to be the most serious (Ryan, 1994: 3). The decision to invest in transferable training has all characteristics of the classic prisoner's dilemma (Finegold, 1991, also cf. section 2.2.6): while all firms would benefit from an adequate supply of transferable skills, for each of them it appears rational not to (substantially) invest in them themselves. This may lead to an underinvestment in more transferable skills (Finegold, 1991; Ryan, 1991), and

an overinvestment in more specific skills (Stevens, 1994b). The importance of this prisoner's dilemma is one key reason why actor-centered institutionalism (which excels in analyzing this and similar types of problem constellations) will serve as an adequate backbone for our theoretical approach to markets for intermediate skills here.

### 2.3.5 Labor markets

The conceptual difference between Becker's analysis and Stevens' reformulation regarding training, as outlined in the previous section, stems from different labor market assumptions. Becker has become famous for his excellent analysis of two cases with radical assumptions (perfect competition and no competition). Stevens has been able to connect these two extremes into a continuum that can be analyzed by one training concept (transferable training) rather than two separate ones, by taking the intermediate (and more realistic) case of limited competition as the starting point for her analysis. It is worthwhile to explore the operation of the labor market from a skills perspective more extensively, because its conceptualization in this book does not use the strict assumptions of neoclassical economics in this respect, and because the departure from those assumptions is, in many ways, essential to the theme of the book and the type of analysis it receives.

#### 2.3.5.1 Qualifications

Labor market analysis, in general, has tended to focus on wage-setting processes, and the institutions that influence them. Wages are, however, only one side of the trade that takes place in labor markets. A labor market contract does not only specify the wage level, but also (more or less precise) the tasks the worker will be performing. Such contracts will only be concluded if the employer trusts the worker to either command the skills necessary to perform the job, or to be capable of acquiring them after a (preferably brief) initial period of learning (be it informally on-the-job, or through a formal on- or off-the-job training program). Obviously, there is a strong relation between job contents and the wage associated with it. There is also a strong relation between skills level and previous acquired educational credentials.

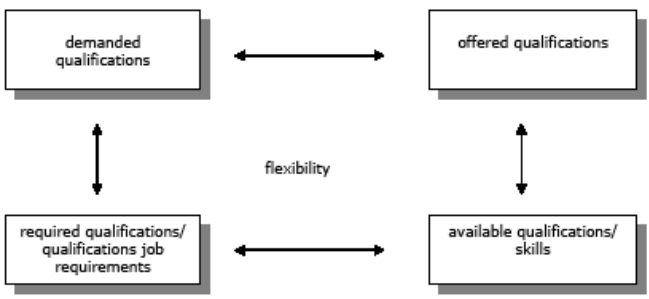
The key concept here is that of 'qualification'. In practice, the term qualification is used in many different ways: it may refer to characteristics of a person, to characteristics of a situation, or to the relation between a person and a situation. Hövels (1993) brings order to this potentially confusing concept by distinguishing available qualifications (skills the worker supplies), required qualifications (tasks the employer wants performed) and realized qualifications (the result of the interaction between both). With Hövels, we prefer to limit the use of the term

qualification to this latter sense: it refers to the *relation* between a person and a situation, rather than merely to the person or the situation (Hövels, 1993: 25-26). Qualifications are the result of the interaction between supply (the skills a worker commands) and demand (the tasks a job - and, therefore, the employer - requires). Instead of 'available qualifications', we will use the term 'skills'. The term does not merely imply abilities, but also knowledge and dispositions that enable workers to perform certain jobs (cf. Van Hoof & Dronkers, 1980)[12]. We will use the term 'job requirements' instead of 'required qualifications'. And we will reserve the term 'credentials' to refer to diplomas from educational institutions – another purpose for which the term qualification is used in much of the literature.

Qualifications are never fully defined. Labor market contracts are limited in their specification of tasks to be fulfilled. Their main function is to certify that a worker puts his labor potential at the disposal of his employer for a specified period of time (Hövels, 1993: 26). The contract does certainly imply a certain direction of the kind of tasks to be fulfilled by the worker (e.g. an employer cannot have a manager sweep floors routinely), but remains far from fully specifying the exact extent and nature of these tasks[13]. Particularly in larger firms, management may have created job descriptions that are much more specified than labor contracts, but even they will not fully define all actual day-to-day tasks. Workers (and their supervisors) have at least some room to maneuver. The other side to the incomplete specification of job requirements is that the exact extent and nature of a worker's skills are never fully known - not to himself, let alone to his employer. These can only be discovered in the actual performance of a specific job, and even then only to some extent. Each labor process, no matter how fragmented, entails non-formalized and non-formalized knowledge that influences job performance and work organization (so-called tacit skills).

This leaves us with the following scheme, inspired by Hövels (1993: 34):

Figure 2.4: Qualifications




*Source: Adapted from Hövels (1993: 34)*

The scheme may be applied at various levels: an individual worker/job, a firm, a sector, or a national labor market. If we use the single 'qualification', we have to realize that behind it lies a plurality of different skills/job requirements. In addition, such a plurality will have a specific structure with a sort of horizontal dimension (a list of separate skills that are relevant) as well as a sort of vertical dimension (skill X needs to be commanded top-notch, skill Y only at a basic level). A similar observation holds at other levels of aggregation. For a national labor market, for instance, a certain qualification might be identified as a particular occupation. The horizontal dimension then consists of various economic sectors to which different occupations belong, while the vertical dimension refers to a particular 'level'. That level might either be identified as an educational level (ranging from no diploma to university graduate) or the place in the job hierarchy of a firm (from floor sweeper to CEO).

Qualifications are dynamic rather than stable (Hövels, 1993: 27). Workers improve current skills and/or acquire new ones over time, while the actual job requirements (in practice, not necessarily those in the print of a labor contract or job description) will also change over time. The latter may be a result of conscious organizational choice, but can also be an outcome of the informal accommodation of the job requirements to the (increased) skills of the worker – and vice versa.

Skills are acquired both through formal and informal learning processes. They can be acquired at school, on the job or even in other spheres of life[14] (Hövels, 1993: 31). Formal learning is always intentional; informal learning may be intentional but can also occur unintentionally. It is important to realize that neither formal nor informal learning is confined to a particular organization. Obviously, schools concentrate on formal learning, but this does not imply that they do not simultaneously provide many occasions for (unintentional) informal learning, particularly where it comes to social and communication skills. Firms may send their workers to formal education and training programs; they may intentionally create circumstances for informal learning (e.g. assigning a supervisor to a new worker); and they cannot prevent unintentional informal learning (nor would they want to).

A related theme is whether and how qualifications are certified. A curriculum vitae is in essence a form of written certification of one's skills, but as it is drawn up by the worker himself, it is not entirely convincing evidence. Therefore, applicants usually have to include (the most relevant) diplomas (credentials) of education and training programs they have graduated from, as well as references to former employers. The former provide a more trustworthy written documentation of skills previously acquired, while the latter will lead to oral information on how those skills interacted with the job requirements of the applicant's previous job(s) – as it is that interaction, rather than the skills themselves, that defines a worker's performance. Just like learning processes, certification may therefore also be (more) formal or informal. The two are related; schools, for instance, are generally considered as

providing (predominantly) formal learning processes and formal certificates. But learning processes and certification may still vary in their level of formality. For instance, if a school diploma is based upon some national form of examination, the certificate received should be considered more formal (and more informative) than when each school develops its own school exams. And, often formal school diplomas cannot only be acquired through completion of the entire program, but also through more or less direct participation in a final exam or an assessment procedure. In these latter instances, informal and/or formal learning processes elsewhere are considered to have provided an adequate functional equivalent to (parts of) the school curriculum – provided the candidate succeeds in passing the final examination. We will explore this topic more extensively when we discuss skills standards systems.

#### 2.3.5.2 A segmented market for a heterogeneous commodity

More fully incorporating the concept of qualification into labor market analysis has consequences for the perspective on such markets. Competition obviously is a crucial element of labor markets. Workers compete with each other for the same job; and employers compete with another to recruit the best workers. In macro-level economic analyses, labor is sometimes treated as a homogenous commodity. Closer scrutiny, however, makes it worthwhile to take the heterogeneity of labor as a starting point. This was already noted by 19thcentury economists like J.E. Cairnes and J.S. Mill (Kerr, 1954; Wolfs, 1992). They pointed to he existence of non-competing groups in the labor market. An unskilled worker in Los Angeles, for instance, does not effectively compete with a manager in New York.

There are two dimensions to this non-competitiveness. The first is qualification. As Cairnes (1874) put it:

> "What we find, in effect, is, not a whole population competing indiscriminately for all occupations, but a series of industrial layers, superimposed on one another, within each of which the various candidates for employment possess a real and effective power of selection, while those occupying the several strata are, for all purposes of effective competition, practically isolated from each other."

Different employers offer different jobs; different jobs require different skills; and different workers differ in the mix of skills they command, as well as in the extent to which they command particular skills. Each worker has a specific history of education, training and informal learning. This experience will make him a qualified candidate for some jobs, but not for others. One reason for imperfect competition in labor markets is, therefore, the concept of qualification itself. On the one hand,

the existence of differentiated employers' preferences limits competition: they want workers with a specific set of skills, and generally prefer applicants whose skills best match this set. On the other hand, the preferences of workers themselves will also work to limit competition. Their job preferences as young men and women will have led to them to (try and) acquire certain skills rather than others; and having acquired certain skills and not others, one will (other things being equal) be able to command a higher wage in jobs that require those skills than in those that require other skills. Obviously, other things are never equal in actual labor markets and wage differentials (amongst many other things) may stimulate job and career switches. However, from a market perspective, the number of new transactions (new labor contracts) in labor markets in any given period is substantially smaller than the number of previous transactions continuing: workers' careers show a substantial level of stability in the jobs they subsequently hold. Most workers stay with a firm for a number of years; and even if they move on to another firm, they often end up in jobs more or less similar to their previous one(s).

As a consequence, there effectively is not one homogeneous national labor market where everybody competes with everybody, but a heterogeneous labor market consisting of different labor market segments, whose incumbents will (in principle) compete with one another, but not (or rather, to a lesser extent) with others. Kerr (1954) even spoke of a 'balkanization' of labor markets. He lists five reasons for labor market segmentation: besides employers' preferences and workers' preferences, there are actions by the community of workers (unions), those by the community of employers (employers' associations), and those of the government (Kerr, 1954: 96). He interprets the effects of the last three as 'institutional rules', and the first two as 'free choices' of individual citizens. We will discuss such 'institutional rules' later in this chapter; for now, we will limit ourselves to non-institutional reasons for labor market segmentation.

Besides qualifications, a second reason for imperfect labor market competition and labor market segmentation lies in the existence of regional barriers to competition. As with occupational boundaries, these may be crossed in some cases. But, again as a general rule, a Los Angeles waiter will look for a job in the Los Angeles metropolitan area and not in the New York area. And again, there is an economic rationale for this. While there may be a wage differential for waiters in both areas that make a New York waiter's job a little more rewarding, there are also transaction costs involved in relocating from Los Angeles to New York. These may exceed the expected benefits from the wage increase. In addition, there will often be a social rationale (family & friends) that promotes a job search within a limited geographical area. Employers, on the other hand, will generally have similar reasons for a regionally limited search for workers. If there are numerous adequately qualified waiters available in New York, there is no point for them to advertise a job nationwide, as this will be substantially more expensive than

just advertising locally. And while they will generally prefer a very good waiter, they rarely want the single best in the country. They will have certain minimum qualifications requirements in terms of skills and credentials in mind. Provided that minimum is met, the employer will hire one of the applicants, and preferably the best one. Only in some labor market segments (e.g. top managers or professional sports athletes) do employers as a rule recruit nationwide or even globally, as they expect the economic returns to finding the single best candidate for such a job to be substantially larger than for a waiter job. But as a general rule, and certainly for the intermediate/subbaccalaureate level that concerns us in this book, 'satisfying' rather than 'optimizing' is the adequate description of employers' recruitment strategies for most jobs.

It is important to realize that both employers' and workers' preferences are not stable. Kerr (1954: 93) notes that they vary from person to person, and from time to time for the same person. An individual waiter from Los Angeles may indeed prefer an assembly line job in Los Angeles or a waiter's job in Cleveland at a particular point in time; and he may limit his job search to Los Angeles restaurants today, but expand it to include San Francisco or even Seattle as his current unemployment continues. Hence, the aggregate result of such individual preferences is not a number of sharply demarcated and non-overlapping market segments. As Kerr (1954: 93) summarizes:

> "Most labor markets are (….) indefinite in their specification of the sellers and buyers. Such a labor market is merely an area, with indistinct geographical and occupational limits within which certain workers customarily seek to offer their services and certain employers to purchase them. But any single worker or any single employer may decide to go elsewhere. This might be identified as the 'free choice' market or the 'natural market', for which the individual and changing preferences of workers and employers set the hazy limits."

This way, we have pointed out the segmented and heterogeneous character of markets for intermediate skills. We have done this so far by stressing segmentation as a logical result of the free choices of individual workers and employers, and have not yet included institutional reasons for such segmentation. For both parties, skills requirements and skills supply importantly shape these choices, and narrow the range of viable options considerably. Vocational education and training therefore, by its very nature, works to limit labor market competition below the neoclassical theoretical optimum. And neither legislation nor other regulations are responsible for this: it is simply the specialization that is the collective results of individual workers' and firms' preferences. In addition, we have pointed out that regional barriers add to this segmentation process. These interact with skills requirements

and skills demand; as a general rule, the scarcer particular skills are, the more expansive the geographical area in which employers will actively look for applicants, and workers for jobs.

#### 2.3.5.3 Uncertainty and information

The other important element in modeling the labor market in general and markets for intermediate skill in particular is the concept of uncertainty. Even without other employers explicitly looking to poach the workers you trained, human capital is different from physical capital in that it has feet and may subsequently walk (as already noted by Becker, cf. section 2.3.4.1). Worker mobility therefore has a paradoxical relation with training, which is particularly intriguing given the fact that both mobility (or, more broadly speaking, flexibility) and training serve as separate contemporary slogans for labor market reform (cf. Van Lieshout & Van Liempt, 2000). On the one hand, more transferable training is generally thought to stimulate both mobility and flexibility, because it stimulates worker employability in more jobs and with more employers. The more transferable the training, the stronger this effect will be. On the other hand, however, the more transferable workers' skills are, the greater the chance that they will leave one employer for another one. Since Becker, we have known that the more transferable the training, the less likely employers will be to invest in it. In sum: flexibility/mobility may have a negative effect on the level of training investments, at least by employers.

The point we want to stress here is the basic uncertainty that this implies for both employers and workers. As employers do not know if and when a particular worker will leave, they may be inclined to limit their training investments because of it. But uncertainty does not only apply to employers' training choices, but also to the recruitment of outsiders. Katz & Ziderman (1990) elaborated on the vital role of information in labor markets. The problem is that, when considering applicants, the full extent of their skills is by definition unknown - by an employer, but even by the worker himself (cf. section 2.3.5.1). Katz & Ziderman (1990) distinguish between the 'net present value' of training and an 'options value'. The first relates to the skills needed for the adequate performance of the current job; the latter relates to skills not immediately needed for the current job right now, but which might be relevant for the employer in the future. Katz & Ziderman's 'options value' is in fact the perfect mirror image of the notion of 'functional flexibility' that Atkinson (1985) put forward in his typology of the types of flexibility employers want: the extent to which workers can be employed in different jobs and for different tasks. This is an important step forward, as this concept of an options value captures the essence of how and why more general training is considered of more importance in times when future skills demands - even within specific labor market segments - are more uncertain than ever. Katz & Ziderman (1990: 1148) mention various

components of this options value to employers. For instance, previous transferable[15] training may be used as a basis for advanced training; it may enable employers to employ a worker for other tasks; and it may enhance a worker's ability to deal with certain types of new technologies. Katz & Ziderman point out that it is already very difficult for employers to judge the net present value of applicants that have had transferable training, in particular as there are of course all sorts of such training, and employers need a recruit with exactly the type of training for their specific job opening at hand. In addition, work-based training is often offered in a non-standardized and/or informal form. It is, however, even more difficult to judge the options value: this will only show itself - even to the worker - when he is given other jobs, so that his performance in them can be judged. Katz & Ziderman also point out why this uncertainty is crucial: placing a worker without the (proper) training in a position that requires such training may be directly wasteful and destructive, all the more so because one worker's inadequate performance may hamper that of others.

On the other hand, workers face uncertainty as well. If they invest in transferable training of their own accord, recouping the investment is contingent upon finding subsequent suitable employment, and the risk is always there that they will not be able to find such employment. In section 2.3.4.1, we have already discussed possible limitations of external financing for human capital investments, as well as Becker's analysis that pointed out that human capital investments would be made earlier and presumably with less knowledge than other investments. To the extent that workers find a firm offering a job connected with training, this uncertainty can be reduced; the more so, if they come with labor contracts for a considerable period of time, and/or including training rights.

If uncertainty is an important consideration regarding training investments, its logical consequence is that information is an important aspect to be considered as well. We have already noted the relevancy of information for employers; for individuals, trustworthy information may reduce uncertainty and thus stimulate their training investments. Two kinds of information seem relevant here for workers: information on wages for various jobs and information on the kinds of training needed to successfully apply for such jobs. For employers, reliable information on the skills workers actually command is important. And, apart from trustworthy information, we have touched upon the possibility of (labor and/or training) contracts specifying rights and obligations of both employer and worker regarding training investments and (future) employment.

#### 2.3.5.4 Labor contracts between markets and hierarchies

So far we have discussed the free choices of employers and workers as a non-institutional reason for labor market segmentation, and mobility/uncertainty as

possible roadblocks to training investments. We have arrived at a basic institutional solution to reduce such uncertainty: contracts. North (1981) has shown that the basic institution that constitutes markets is the institution of the contract, which attributes property rights to specific actors. Markets can only function if it is clear who has the ownership of a particular good or service. The state ultimately guarantees the fulfillment of these contracts by its monopoly on the use of legitimate force.

But labor contracts differ from spot-market contracts for goods such as lemons, in that they do not entail an instantaneous permanent shift of ownership. Labor contracts regulate a different kind of exchange, in which workers will make their labor available to a particular employer for a period of time, in exchange for a wage and other benefits. A minimum contract version is that of an on-call worker or of a worker employed through a temporary employment agency, in which the transaction is limited to the availability of work, and the relation between worker and firm will typically be short-lived. Most contracts, however, offer the worker employment for a limited or even an unlimited period. While such contracts can be ended prematurely by both parties, restrictions usually apply, such as a minimum period of notification, external review (by courts or other parties) of the legitimacy of a dismissal, and/or severance packages. These conditions vary, primarily in relation to national labor legislation, a topic we will discuss later in this chapter. Also, labor contracts are usually less specified than other contracts, in the sense that they consciously leave some room to maneuver as to the exact tasks to be fulfilled by the worker (cf. section 2.3.5.1). Instead of documenting an instantaneous transaction, the conclusion of a labor contract implies the start of a cooperative effort for a period of time.

While we often speak of the labor *market*, the majority of that market consists of *firms*: one employer is simultaneously engaged in labor contracts with several workers. The relevancy of the firm for economic analyses was already stressed early last century (Coase, 1937). Besides occupational specialization and regional segmentation (cf. section 2.3.5.2), the mere existence of firms limits - or, rather, changes - the operation of the market mechanism for labor. Perfectly competitive markets require open access to new entrants, on the supply as well as on the demand side. But at any given point in time, the majority of all jobs are *not* open to new entrants. As Kerr (1954: 101) put it:

> "Not all jobs are open to all bidders except in the structure-less market. Even in the absence of institutional rules, most employers consider a job not open for bid so long as the incumbent fills it satisfactorily; and employers generally prefer to promote from within to canvassing the outside market."

Williamson (1975; 1985) has built his transaction cost economics upon this insight, and elaborated the distinction between *markets* and *hierarchies* (firms) as forms

of economic coordination (Williamson, 1975; 1985). Transaction cost theory in fact offers an economic explanation for the existence of firms by introducing transaction costs into the analysis. To satisfactorily engage in market transactions calls for extensive monitoring of the appeal of the offers of various suppliers, and of the satisfactory fulfillment of concluded contracts. When such costs are high, it may be more efficient to provide the products or services in-house, under one's own (hierarchical) authority. Hence, transaction cost economics introduces hierarchies (firms) as an alternative governance mechanism for economic activity to markets – rather than exclusively seeing firms as actors in an external market.

In terms of actor-centered institutionalism, firms are a clear example of a *composite* actor (cf. section 2.2.5). On one level, the firm has certain resources that it employs in strategic action *vis-à-vis* other, external actors. But on another level, that same composite actor is an institutional structure (or governance mechanism) that coordinates activity of several individual actors within their ranks. In labor market theory, this is reflected in the distinction between external and internal labor markets. While firms routinely do recruit workers in the external labor market, they also tend to operate internal labor markets (cf. Doeringer & Piore, 1971). At any point in time, only a limited number of jobs within a firm are in fact open to outsiders. First of all, most jobs are currently not vacant. And even in a relatively competitive labor market, employers are not consistently looking for a better (or cheaper) worker to replace an incumbent worker in a given job - let alone for all jobs at the same time. External recruiting activity is primarily triggered by the occurrence of vacancies. These arise because of an expansion of production or because of the (in)voluntary departure of an incumbent worker from that job. Second, even when a vacancy arises, the employer may first look to promote another incumbent worker to this vacancy - which implies that the job is still not open to outsiders. This will not always or necessarily be the case; there may be specific reasons why an employer does prefer to hire an outsider. A lack of adequate candidates for the job within the firm is one, the wish to influence the firm's culture by bringing in an outsider another.

Assuming stable employment, one person's departure will indeed open up a job sometime somewhere for an outsider. This job opening, however, is not necessarily the same as the job that was vacated. Obviously, few if any jobs exist that will always by definition be fulfilled by an internal candidate (or, alternatively, an external one). This will depend upon the situation at the time. But even if each job is at least once in a while fulfilled by an outsider, there may be structural patterns in the chances of that job being fulfilled by an outsider or an insider as compared to others. Some jobs are more (often) open to outsiders than others. Entry jobs - 'ports of entry', according to Kerr (1954) - serve as the connection between internal and external labor markets. Given the expected substantial tenure and upward mobility for many workers on internal labor markets (and given the impossibility of internal upward

mobility to the lowest rung), a disproportionate share of these ports of entry tends to lie at the lower rungs of firms' job ladders.

Wolfs (1992) discusses six theoretical approaches to internal labor markets[16]. The radical approach (cf. Reich, Gordon & Edwards, 1973) interprets internal labor markets as an instrument for management to gain control over their workforce. Control would increasingly be institutionalized in hierarchical power, work criteria, rules and procedures as a conscious divide-and-rule strategy to divide a potentially homogeneous labor force in separate groups and treating each of them a little differently (Wolfs, 1992: 21-23). We have already discussed the main lines of transaction cost economics (Williamson, 1975; 1985) above. It suggests that internal labor markets can be more efficient in a situation of imperfect information or firm-specific skills investment. Labor can be hired without exactly specifying all tasks to be performed. Instead, a worker is assigned to a job, which is related to a particular wage. This implies lower transaction costs in wage bargaining, motivates workers by offering internal promotion opportunities, and allows investment in specific skills without the risk of exploitation by the other party (cf. Wolfs, 1992: 26). Implicit contract theory (cf. Azariadis, 1975) stipulates that workers and employers agree on a mutually advantageous unwritten long-term contract. Because they are uncertain over future conditions, both are inclined to limit their risk by preferring contracts with fixed, situation-invariant wages (Wolfs, 1992: 28-31). Efficiency wage theory (cf. Akerlof, 1984) points to information problems stemming from the fact that individual productivity cannot be perfectly measured. Therefore, employers are inclined to pay higher wages to attract better workers (adverse selection), to prevent shirking, to reduce turnover and the associated costs, to boost worker morale, or to prevent unions from entering the firm (Wolfs, 1992: 32-33). Insider-outsider theory (cf. Lindbeck & Snower, 1988) stresses labor turnover costs, instead of effort and productivity. It distinguishes three kinds of turnover costs: 1) costs of hiring, training and firing; 2) costs of co-operation between workers and harassment of new workers; 3) costs of effort responses to changes in job security. For this reason it is unprofitable for a firm to replace insiders by outsiders.

The sixth theoretical approach to internal labor markets that Wolfs (1992: 26-28) discusses is of particular interest, as it puts skills and training at the heart of the explanation of internal labor markets: human capital theory (Oi, 1962; Becker, 1993). The assumption is that the total expenditure (investments) of both parties equals total revenue not at each point in time, but over the time span of the employment relation. Specific training increases the productivity (and, thus, according to standard economic theory, the wage) a worker can earn with his current firm, but not with other firms. This gives them a reason to share both the firm-specific training costs as well as the gains of extra productivity stemming from it in later years, and gives both an advantage in long-term employment relations (Oi, 1962). The basic reason for this is that specific skills are a 'sunken' investment.

Oi (1962) therefore has labeled labor a quasi-fixed factor: past investments in firm-specific skills creates an incentive to maintain an employment relation. If one worker departs, the firm will have to make a similar but new investment in his successor. And the worker will have to make a new investment in the firm-specific skills of his new employer.

Similar insights stem from Thurow's job competition model (Thurow, 1975). In this model, productivity depends on the job, wages are coupled to jobs, and workers compete for jobs – instead of for wages, as in wage competition models. Markets clear in the short run through adjustments in labor demand and supply, not through wage fluctuations. At the firm level, wages are coupled to jobs and thus sticky. Thus, hiring standards rather than wages are adjusted to clear markets. Employers would rank all applicants according to expected training costs, and hire those with the lowest costs. New recruits subsequently receive training from incumbent workers. Seniority rules protect the latter from outside competition. The result of this is internal labor markets with limited ports of entry.

These theories are to some extent overlapping, and to some extent complementary. Wolfs (1992: 16) concludes that there is much agreement on the broad description of internal labor markets, but that the descriptions used are vague and general, and that there is no clear-cut definition or framework which adequately reflects the internal labor market.

For our purposes, the following four aspects of internal labor markets are important. Following Kerr (1954), the first thing is the restricted nature of access to many jobs where incumbents are generally preferred over all competitors, and (for vacancies) insiders are generally preferred over outsiders. The second is the existence of long-lasting ties between firms and many of their workers. The third is the existence of some sort of internal promotion mechanism for workers. This may be in the form of formal promotion to a different (often, higher) job, but also informal, when workers remain within the same job for years but receive wage increases along the way, as a result of their growing seniority (cf. Wolfs, 1992: 18-19). Two types of promotion mechanisms can be distinguished (Hondeghem, 1990; Van Veen, 1997). With 'rank-in-the-man' systems, allocation is triggered by individual characteristics of the employee, whereas with 'rank-in-the-job' systems, it is triggered by an arising vacancy along the lines discussed above. The fourth and last is the existence of some form of 'bureaucracy' to govern the internal labor market: formal, but possibly also informal rules and procedures that govern access to the firm and specific jobs within it, the related (direct and indirect) benefits, and workers' (opportunities for) career advancement.

These four things go a long way in distinguishing internal from external labor markets. The distinction between internal and external labor markets is important, as different rules and mechanisms apply to both, and as they relate to two different dominant governance mechanisms (hierarchies and markets, respectively). The

market mechanism dominates external labor markets, albeit within the context of national labor legislation. Internal labor markets are, in addition, governed by rules and procedures set by the corporate hierarchy (firm), that effectively limit the 'free' operation of market mechanisms within the firm. As Osterman (1994: 303) puts it:

> "It is by now apparent to even the most market oriented economist that many of the rules that determine economic outcome and social welfare originate within the firm and are in a nontrivial sense chosen by the firm. Because many workers spend long stretches of their career within the shelter of enterprises, understanding these rules is very important."

Incorporating the relevancy of firms' governance of their own internal labor markets also helps us to broaden our perspective on their options regarding qualification and training issues. Much analysis focuses on two alternative options for firms: train or hire. The first implies training your own workers, the second hiring already qualified workers on the external labor market. In the short run, these are indeed the two most relevant options. But in the intermediate run, there is an intriguing third. For the first two options simply assume that a firm's labor demand is given, and show two main directions to fill that demand once vacancies arise. However, in the intermediate run, labor demand is not given, but can be influenced by firms in changing job descriptions and job ladders. Internal labor market governance is not just limited to allocating incumbent workers and outside recruits to a 'given' job ladder; the definition of such job ladders itself is another key element of firms' governance of their own internal labor market. So in our analysis in this book, we will follow Hövels (1993: 35) in distinguishing three main options for firms in their qualification policies:

- reallocating workers (incumbent workers and external workers) to jobs;
- training workers;
- restructuring work organization.

### 2.3.6 Two markets and their relations

Having discussed important aspects of both education and labor markets, we move on to discuss the relations between both markets. We will first discuss the concept of the school-to-work transition (2.3.6.1). Subsequently we will turn to institutional differentiation within both markets, and the possibility of mismatches between education and labor (2.3.6.2). And we will conclude by discussing various institutional configurations that can strengthen the relation between education and labor (2.3.6.3)

#### 2.3.6.1 The school-to-work transition

Over the course of their lives, young individuals will first participate in educational systems. This participation is obligatory in each modern society, because education participation is thought to be a necessary preparation for citizenship in our societies. One of the various more specific goals education systems should serve in this respect, is to lay a foundation for a productive labor market career. At some point in time, young adults will leave the education system and start their participation in the labor force. This transition is mostly referred to in the literature as the school-to-work transition; transitional labor market theory (Schmid, 2000; Schömann & O'Connell, 2002) labels this the education-to-employment transition. The societal goal would be to ensure that young adults enjoy a smooth transition from education to employment. The 'natural' linear transition would be from primary into general secondary education, to continue in higher education (university or polytechnic) or alternatively in upper secondary vocational education, to finish training for an occupation/a profession there, find subsequent suitable employment within the occupation/profession of choice, and enjoy a productive career there, in combination with occasional further training, up until a well-deserved retirement.

In practice, however, this education-to-employment transition is not always easy, as is evidenced by the fact that in most OECD countries, youth unemployment tends to be substantially higher than overall unemployment, in general, and even more so in times of economic recession, when slumping labor demand leaves few job openings for the new generation of labor market entrants. And, such unemployment is regularly not just a one time problem when leaving the education system, but for certain groups (and, in some countries more than others, cf. section 2.3.7) can be a recurring problem over the first years of their labor market career. Instead of a linear transition, many young adults experience what have come to be called 'yo-yo' transitions (Pais, 1996; Peters & du Bois-Reymond, 1996). The transition process from education on to the labor market, instead of a logical linear progression, may often be fragmented and reversible, with relatively short spells of education/training, jobs, and unemployment alternating one another in no particular order.

In order to understand how problems may emerge regarding the education-to-employment transition, we have to understand the institutional differentiation both within and between education and labor markets, and the various discrepancies that may arise as a consequence.

#### 2.3.6.2 Institutional differentiation and discrepancies between education and labor

*Institutional differentiation between and within education and labor markets*

In history, education and labor have gradually developed into separate societal (sub)systems/markets, and this is the core source of structural tensions between both. Hövels (1993: 10-11) distinguishes three particular sources of tension.

First, both education and labor markets have evolved as different subsystems with their own goals and own dynamics over time, which is a *technical* source for structural tensions between education and labor (Hövels, 1993: 10-11). Education systems have, over the last few centuries, evolved from voluntary 'primary' schools for children into a large system with different levels and types of schools, each of these types usually entailing a further differentiation within their ranks, and intending to cater for very young children up to and including young adults in their twenties, as well as specific adult education offerings; also, these systems have become quite autonomous in their operation, and their current structure co-determines their subsequent evolution (cf. Archer, 1979; 1982; De Swaan, 1988). The labor market is also highly differentiated (cf. section 2.3.5), and is subject to constant changes as a result of technological (and other) developments that change the nature and specific requirements of jobs. The institutionalization of each market following a logic and pattern of its own, both will seldom offer a perfect match – and if they actually did, it would be a matter of pure chance.

Second, education systems serve more goals than just delivering adequately skilled workers for the labor market. Hövels (1993: 11) distinguishes three separate goals that compete in the development of VET: preparation for work, social and cultural socialization, and personal development. The same goals, however, both co-exist and compete in the institutionalization of entire education systems (cf. Bakker, 2001 on the case of the Netherlands), which is a *political* source for tensions between education and labor. Different positions on the necessity and role of specialized VET tracks as an alternative to general education tracks, for instance, generally stem from different views on the relative importance of these goals. Obviously, the differentiation in education systems between general/academic and vocational subsystems is important for our comparison, and labor market preparation is relatively more important for the latter than for the former. Still, it is worthwhile to note that the difference between both is not as absolute as it may seem. At the level of secondary education, the difference is most noticeable. (Upper) Secondary VET tracks are shaped predominantly in a way that should facilitate subsequent transition into a specific labor market segment; but they often simultaneously offer the alternative of further education and training within the education system. General secondary education tracks, on the other hand, are primarily shaped to facilitate transition in other (upper secondary or tertiary) education; and internally, general tracks tend to be organized according to an academic (rather than a vocational) logic. In practice, however, there are always general education students that opt for employment over further education, and at least some career orientation tends to be part of general education tracks.

However, it is important that VET not only differs from (upper secondary) general education, but simultaneously also from purely job-specific training, which is much more narrowly focused on the skills requirements of one specific job. VET, on the contrary, has a broader focus, namely on a particular range of related jobs[17]. And, the other goals besides labor market preparation (social and cultural socialization, and personal development) are never completely absent from VET. Generally, both courses in general academic topics (e.g. mathematics) as well as a course preparing for social citizenship, tend to be included in them. At the tertiary level, the difference is less marked. To begin with, European countries such as the Netherlands and Germany also have specialized VET tracks at the tertiary level (*hoger beroepsonderwijs* (hbo) and *Fachhochschulen*, respectively). But, more importantly, even academic tracks will generally prepare their students for particular labor market segments (cf. Van Lieshout, 1995). It is hard to see how and why university law schools, for instance, would be less targeted to a very specific labor market segment than a carpentry track at the upper secondary level.

To sum this point up: while these different goals compete, they also continuously co-exist, in the architecture of the overall education system as well as within each of its segments. Not just in the minds of educational administrators, but also in the opinions of firms and their interest associations, and most importantly in the minds of the young people going through these tracks. While preparation for work is certainly not always the most dominant motive for the latter's participation and choices, it is one of their concerns, and the motive will generally become stronger in the latter phases of their educational career. The tensions between these goals in shaping the education system, as well as the individual choices made within their context, are a second source of tension between education and labor market.

A third and last source of tension between education and labor is the hierarchical structure of both education and labor, which is a *distributive* source of tension between education and labor (Hövels, 1993: 13-14). At this point, it is important to further differentiate the specific goal of labor market preparation. Fend (1974) has noted that education does not solely *qualify* people for work; it also *(pre-)selects* them for particular labor market segments, and to some extent *legitimizes* the resulting distribution of people over (in terms of status) differently valued jobs associated with different wages. To some extent, the differentiation of education in various hierarchically arranged levels reflects the differentiation of work in various hierarchical levels, which range from entry-level shop floor jobs to CEOs. The higher jobs are generally better rewarded, because they are considered to be more demanding – in terms of responsibility and/or skills requirements. Or, as economists would prefer, the required skills for such jobs are scarcer than for other jobs. Either way, the fact that their occupants tend to have higher educational credentials (which are scarcer to come by) lends credibility to higher wages accompanying the better jobs. Screenings- and credential theories (cf. Spence, 1973; Collins, 1979) have in fact emphasized the

selective function of education over the qualifying function[18]. Either way, the point here is that both education and labor are hierarchically structured. The numbers of students graduating at the various levels of the education system, however, will not necessarily exactly match the labor market demand at each corresponding level.

*Discrepancies between education and labor*

The *vertical* differentiation of labor is, however, not the only source for distributive problems; the *horizontal* differentiation of both labor and education in terms of occupational specialization is another: the number of graduating nurses may be higher than the labor demand for them, while the number of graduating engineers might fall short of the demand. We will therefore take a closer look at the distributive source of tensions between labor and education in this section, and possible discrepancies between education and labor it may result in.

Discrepancies between education and labor will always show up as discrepancies in the labor market (unemployment or vacancies), but not all labor market discrepancies are caused by a mismatch with the education system. De Grip (1987: 10-15) gives an overview of all possible labor market discrepancies from economic theory. *Quantitative* discrepancies arise if labor supply is higher or lower than labor demand at the macro level. Of course, supply and demand will hardly equal one another exactly, which is why economic theory allows for *friction unemployment in a narrow sense*: short-term unemployment that may arise if people switch jobs. A certain minimum of such friction unemployment is deemed unavoidable for an adequately functioning labor market, as job switching is necessary and may take some time. *Qualitative* discrepancies arise because of the heterogeneity of both workers and jobs – with both the vertical and horizontal differentiation between them as causes of heterogeneity. This heterogeneity may result in the simultaneous co-existence of unemployment for certain types of workers/jobs, and open vacancies for other types of workers/jobs; unemployed nurses cannot (immediately) fill engineer vacancies.

Following De Grip, there are different types of qualitative discrepancies. *Geographical* discrepancies exist if one region has unemployed workers of a particular type, while another region has a shortage of them. *Search* discrepancies, as De Grip calls them, are in fact an extension of the aforementioned friction unemployment in a narrow sense. The idea is that certain institutional factors such as high unemployment benefits might cause friction unemployment to lie above the aforementioned minimum that is deemed necessary for an adequate operation of the labor market. Distinguishing friction unemployment in a narrow sense from search discrepancies is at best a highly theoretical matter, and at the worst a political-normative one. Only the third category of qualitative discrepancies deals explicitly with education, training and skills: *training and experience* discrepancies.

Training and experience discrepancies can be of both a horizontal and of a vertical nature. *Horizontal* discrepancies deal with differences in the occupational/educational specialization of open jobs and unemployed workers; *vertical* discrepancies with the educational level/job rank that supply and demand represent. De Grip distinguishes three types of vertical training and experience discrepancies. First, vertical discrepancies may arise primarily because of the distribution of graduates and jobs over *general school levels/types* (e.g. an oversupply of lower secondary education graduates versus a shortage of upper secondary VET graduates). Second, vertical discrepancies may arise primarily because of such distribution problems within a certain *occupational group*: there may be enough bank clerks, but a shortage of loan approval officers. Third, vertical discrepancies may arise at an even more detailed level, as *experience* discrepancies: for example, enough carpenters, but none of them experienced enough to act as foreman at the construction site. In practice, vertical occupational training discrepancies and experience discrepancies will usually be strongly related.

One interesting debate regarding vertical discrepancies is the debate on potential *over-education* of young people. The debate centers on vertical discrepancies regarding general school levels and it is of interest because the thesis would seem to contradict the prevailing argument of skills shortages and the need for (lifelong) training. In the seventies, such a debate took place in the U.S. (cf. Freeman, 1976), where it since then has given way to a debate about skills shortages and the 'missing middle' in the American labor market. A similar debate, however, still props up with regular intervals in other countries. Among countries included in this study, the Netherlands is the prime example[19]. There, a recurring over-education debate has been triggered by reports from a research group that compares change over time in job demand at a number of hierarchical job levels to changes in the number of graduates from the education system at various levels. Such a comparison indicates that educational participation and, hence, the skills level of the workforce, has been growing more rapidly than changes in the job structure in the labor market would seem to warrant (cf. Conen et al., 1980; 1983; Huijgen et al., 1983; 1998; Huijgen, 1989; Asselberghs et al., 1998; Batenburg et al., 2003). In other words, younger generations might generally be overeducated. The latter inference has met with substantial criticism (cf. Wielers & Glebbeek, 1990; 1995; Groot, 1998). One important counterargument is that measuring shifts in labor demand over different job rungs and comparing them to shifts in initial education levels fails to measure the increased skills demands of jobs within such job rungs. For one, the educational shift indicator is limited to formal initial education levels, and excludes participation in further training. More importantly, even if formal skills demands for such jobs have not risen, this does not preclude a better initial skills acquisition from paying dividends (in terms of higher productivity) even if formal job qualifications had remained stable. There is evidence that productivity may be higher if a job is dome by a better-educated person (Van der

Meer & Glebbeek, 2002: Hartog, 2000: Groot & Maassen van den Brink, 2000). Third, both general education and VET mean to provide a basis for a productive career, rather than just a first job. While a frontline worker today may formally be working on the same job rung as his ancestor in the sixties, one can hardly argue that the skills demands for the job have not risen substantially in comparison. The hypothesis that overeducation may be concentrated among young people, who will subsequently move on towards jobs matching their education level, is known as the 'waiting room hypothesis' (De Grip et al, 1990), and has been confirmed by empirical research (Dekker et al., 1995; Groot & Maassen van den Brink, 1996; Groeneveld & van Kooten, 2001). However, there is still some value in the over-education argument as it pertains to the job rungs. Educational participation has indeed risen so rapidly over the last few decades, in particular at the higher levels, that those education levels do not to the same extent guarantee an elite job the way they used to. Employers can respond to this increased skills supply with changes in work organization that make full use of this potential; but alternatively they may and do respond to it by increasing skills (credentials) demand for jobs at the lower rungs. Given employers' preferences for (*ceteris paribus)* higher credentials, many young people prefer to pursue higher credentials (at least until suitable employment opportunities open up) and stay out of the labor force, rather than be perceived by employers as someone working in a low-skilled job (Crouch et al., 1999: 230).

One source of confusion in discussing discrepancies is that sociologists have tended to label all the aforementioned types of training and experience discrepancies as *quantitative* rather than qualitative (cf. Van Hoof & Dronkers, 1980). They have reserved the term 'qualitative discrepancies' for differences between workers' capacities and the requirements for an adequate fulfillment of their current job. To avoid confusion, De Grip (1987) proposes to label the horizontal and vertical training and experience discrepancies he distinguishes as *open* discrepancies, as they show up as either unemployment or unfilled vacancies in the labor market. Discrepancies between a worker's capabilities and the requirements of his current job could then be labeled *hidden* discrepancies.

It is nevertheless helpful to look at another typology of potential problems than that put forward by De Grip, as it points out various relevant but different perceptions of such problems by different actors. Van Hoof (1987: 108-112) and Hövels (1993: 15-17) distinguish five types of skills mismatches:

- *absorption problems*: there is a mismatch between the total number of job openings and the number of school-leavers, resulting in (long-term) unemployment;
- *personnel supply problems*: employers have problems in filling vacancies: they cannot find an adequate candidate - implying that the problem has a quantitative nature;
- *qualification problems*: employers can fill vacancies, but the workers concerned do not command all qualifications required - implying that a quantitative problem is

avoided, but in a way that creates qualitative problems;
- *distribution problems*: the chances of a job matching their skills are unequally divided across various groups of workers: they differ for groups with different educational credentials;
- *utilization problems*: their jobs do not allow workers to maximize the potential they have to offer based on their education, training and prior experience.

The relevancy of this typology lies, first, in the fact that it shows that matching problems occur *at different levels*. Absorption, personnel supply and distribution problems show themselves primarily in the labor market, by means of unfilled vacancies and/or (long-term) unemployment. Qualification and utilization problems primarily show themselves within firms and specific departments and jobs within them. Second, the typology shows that there are *various sides* to such problems. With personnel supply and qualification problem, the (dominant) perspective is that of the employer; with distribution and utilization problems, the dominant perspective is that of the worker; and with absorption problems, the dominant perspective is that of the state. Third, and as a logical result, the different types in this typology are not mutually exclusive. They overlap, for instance, where an imperfect match between a worker's skills and his job requirements may be interpreted both as a qualification and a utilization problem. And they are - at best - only separated by a very thin line, when we distinguish personnel supply problems from qualification problems. An employer that cannot find an adequate candidate to fulfill a particular vacancy may do two things: he may hire a less qualified candidate, or he can leave the vacancy open for the time being. For the employer, the problem is one and the same; but depending on his choice of action, the problem will end up showing itself as either a qualification problem or a personnel supply problem.

An overview of (skills-related) labor market discrepancies should include an important caveat. While avoiding labor market discrepancies is obviously a worthwhile cause, it is unrealistic to expect a world in which they are completely absent. To begin with, education serves more goals than training for employment; and important segments of the education system (general and academic education, for instance) do not have labor market preparation as their official top priority. Even VET systems are often not expected to offer perfect training for the student's first job; rather, the goal is to prepare them for a successful career (a topic we will discuss more extensively in section 2.3.6.3). More importantly, to the extent that each job will have some firm-specific skills requirements, some amount of on-the-job training will always be required for VET graduates, even if their first job actually fits their specialization.

Furthermore, the evolution of time is important. Education and training take time. A student may choose a particular VET track based upon the good job market for that particular occupation at that pointing time. By the time he graduates from

this track, however, he may find that the job market has turned sour for that occupation. In fact, Boudon (1981: 142-145) offers an interesting theoretical elaboration how such rational education choices based upon current labor market prospects may even work as a self-denying prophecy. Suppose in year T there is a high number of vacancies for teachers, which causes more young people (ΔN) to opt for a teacher education in that year. Also suppose that ΔN would be enough to satisfy the number of teacher vacancies in year T. The problem is, however, that it will take the new teacher students four years to graduate and actually be allowed to fill those vacancies (T+4). So in year T+1, the number of teacher vacancies will be as large as the year before – again attracting ΔN extra teacher students. By the time this second generation graduates (T+5), however, the previous generation will already have solved the teacher shortage – and at T+5, Δn students will not find schools fiercely competing for their services – but find themselves unexpectedly unemployed instead. Obviously, this particular example is based on quite unrealistic assumptions (stable labor market demand, for instance, and no alternative sources of labor recruitment than education), but such *pig cycles* actually occur in student choices *vis-à-vis* labor market demand (cf. Batenburg et al, 2003: 31). If such labor market shortages would indeed lure more students into the related education tracks, it will take at least a couple of years before they can meet this demand and achieve an optimal equilibrium. And, rather than achieving a *stable* equilibrium, the collective result of such (at the time) rational choices may be the opposite extreme: from an unfilled vacancy problem to an unemployment problem. Stable equilibriums in the school-to-work transition are, thus, much harder to achieve than a casual first impression might suggest. The fact that labor demand is not stable over time might increase the problem: chances are these vacancies are long gone by the time even the first generation of extra students graduates. Actually, this is quite likely, as there are other sources to meet labor demand (e.g. recruiting trained teachers that had left the labor market), and schools can hardly afford to wait four years to fill such vacancies.

This typology of matching problems and discrepancies was presented to familiarize us with the various problems that may occur at the crossroads of education and labor market. Policy concerns about an adequate quantitative and qualitative supply of graduates, and an optimal matching with demand for them, are an important background for this book. The research itself reported upon in this book, however, does not analyze the occurrence of matching problems in the various countries and sectors in any depth. Instead, it focuses on the specification of the institutional order that influences supply of and demand for intermediate skills. But evidence of matching problems and discrepancies from other research will figure in the analysis of the pros and cons of the performance of various markets for intermediate skills.

#### 2.3.6.3 Institutions and the school-to-work transition

Institutional differentiation, both between education and labor markets, as well as within each of them, calls for institutions to achieve a favorable equilibrium, both in the short and the long run. The market obviously is one important institution that may go a long way towards achieving such goals; but as any coordination mechanism, it is not without its flaws, and various potential ones have been pointed out earlier in this chapter. We need to include other general governance mechanisms, as well as various specific institutional configurations shaping VET and labor markets, in the analysis. We will first consider general coordination mechanisms and the governance regimes they constitute, and will subsequently discuss various specific institutional configurations shaping VET and labor markets.

*Coordination mechanisms, actors and governance regimes*

That the *market* is not the only relevant coordination mechanism for markets for intermediate skills, and most likely not by itself sufficient, has already been argued by showing the relevancy of two other, alternative coordination mechanisms for these markets. First, we listed arguments for *state* intervention with education markets in general (section 2.3.2) and markets for intermediate skills in particular (section 2.3.3). Second, we pointed out the important contribution of transaction cost economics in sharply distinguishing between market mechanisms and firms or *hierarchies* as an alternative coordination mechanism. The success of capitalism is the success of the evolution of not just markets, but also of (large) firms as a historically distinct economic coordination form, different from (for instance) the important role of guilds in European economies of the Middle Ages, or of families and clans in agricultural economies.

Transaction costs economics itself has, however, also met with substantial criticism (cf. Hodgson, 1988; Lindberg et al., 1991). These critics consider the typology of governance mechanisms within transaction cost economics still incomplete, and its conception of human choice still too rational and efficiency-driven, as it sees the balance between hierarchies and market as the necessarily efficient result of a selective competitive process. This has inspired a body of literature that Mayntz & Scharpf (1995) refer to as institutional economics, but that is also referred to as the 'governance' approach (Streeck & Schmitter, 1985; Campbell et al., 1991; Hollingsworth, 1991; Hollingsworth et al., 1994a; Van Waarden, 1997; Van Lieshout, 1999). These authors share the view that transaction costs economics still underestimates the role of cooperation, socialization and institutions. The argument goes two ways. First, the three-part typology of market, state and firms as governance mechanisms is still not comprehensive enough, and should be expanded by others; most importantly, associations and networks. Second, while

the bounded rationality used by transaction cost economics is an improvement over the neo-classical assumption of more or less unbounded rational choice, it is not enough. This latter criticism is similar to that put forward by Mayntz & Scharpf (1995, p. 52-53) and Scharpf (1997: 19-22; cf. section 2.2.5). We have already outlined the theoretical approach underlying the analysis in this book, actor-centered institutionalism, in section 2.2, including its treatment of actors and actor orientations, and will therefore limit ourselves to the first element of the aforementioned criticism here: an expanded typology of governance mechanisms.

This governance approach has been criticized for failing to clearly demarcate the various types of governance mechanisms. Mayntz & Scharpf (1995: 60) state that governance theory suffers from the multi-dimensionality of the underlying classification. They certainly have a point here, which is illustrated by the fact that different authors have in fact proposed different typologies. These differ both in the number of governance mechanisms proposed, their names and definitions, and the underlying dimensions - if any - from which they are derived.

Streeck & Schmitter (1985) distinguish four types of governance mechanisms: community, market, state and association. They list twelve dimensions of difference between them. The core difference is that each has a distinctive guiding principle of coordination and allocation: spontaneous solidarity (community), dispersed competition (market), hierarchical control (state) and inter- and intra-organizational concertation (association). What their typology lacks, however, is the separate coordination mechanism of hierarchies (or firms), whose relevance has been shown by transaction cost economics.

Lindberg et al. (1991) list seven governance mechanisms. Six of these are derived from two underlying dimensions: the degree of formal integration (low, moderate or high) and the range of interaction (bilateral or multilateral). In addition, they devote much attention to the state. But as this does not fit in their scheme based on the aforementioned two underlying dimensions, they choose to conceptualize and theorize on the state in its own terms. Their typology has, however, two weaknesses. First, they do not base the coordination mechanism of the state on their two underlying dimensions, which deprives their typology of much of its first glance theoretical elegance. Second and more importantly, their distinction between bilateral and multilateral forms of coordination is highly problematic, in particular with the interpretation of markets and hierarchies. This way, markets are reduced to bilateral contracts, whereas the crucial aspect of markets from a governance viewpoint is indeed the multilateral coordination between actors that can be achieved through their engaging in bilateral contracts. Similarly, hierarchies - also interpreted as bilateral - typically coordinate the behavior of more than two individuals as most firms employ more than one person.

Most authors have opted for a five-part typology (cf. Hollingsworth et al., 1994a; Van Waarden, 1997; Van Lieshout, 1999). In the words of Hollingsworth et al.

(1994b: 5-7) these are markets, states, hierarchies, associations and networks. But there remain differences between these authors in their specific terminology and definitions.

Van Lieshout (1999) has specifically applied this frame of analysis to the field of VET. For the purposes of this research, however, only four of the coordination mechanisms have been explicitly included in the analysis. *Networks* were not specifically included in the research design. While network elements do play some role within the three countries analyzed, and will be pointed out when relevant in the country chapters, this research (as outlined in chapter 1) specifically intends to focus on including *associations* as a distinct fourth coordination mechanism relevant for markets for intermediate skills – a necessity for the German market for intermediate skills (cf. Streeck et al., 1987) and empirically also essential in the Dutch market for intermediate skills (cf. Dercksen & Van Lieshout, 1993). The theoretical ambition for this project was to use the empirical research to come up with a theoretical framework for comparative VET research that included the distinct role of associations, whose absence can be considered a weakness of other general theories applied to VET analysis (Dercksen & Kamps, 1992; cf. chapter 1). Having established the relevancy of markets, hierarchies and the state for such an analysis earlier in this chapter, we have yet to pinpoint *associations* as a separate governance mechanism.

*Associations*

Governance theory stresses the role of associative behavior in general and of associations in particular. Not surprisingly, an important share of its roots lies in the neo-corporatist tradition of the nineteen eighties, but attention to the role of associations in labor market governance dates back to earlier days. Kerr (1954), for instance, explicitly listed the collective actions of the community of employers (employers' associations) and workers (unions) as formal rules causing additional labor market segmentation beyond that which stems from individual employers' and workers' preferences. But it was in particular Streeck & Schmitter's work that put forward associations as an important alternative form of governance (Schmitter & Streeck, 1981; Streeck & Schmitter, 1985). Streeck & Schmitter (1985) see 'organizational concertation' as a fourth guiding principle of interaction and allocation, next to `dispersed competition', 'hierarchical control' and `spontaneous solidarity'. Cohen and Rogers (1992: 424-425) name four useful functions that associations can fulfill for societies. First, they can provide information to policy makers on their members' preferences. Second, they can help remedy inequalities in material advantage by permitting individuals with low per-capita resources to pool these through organization. Third, they can function as 'schools for democracy' in that they can help citizens develop competence, self-confidence and a broader

set of interests than they would acquire in a more fragmented political society. Fourth (and this is the crucial point for governance theory) they can provide a distinctive form of social governance, alternative to markets and hierarchies, that permits society to realize the important benefits of cooperation among citizens.

At first glance, associations may appear similar to hierarchies. But the prime difference with hierarchies is that associations have members. These members in fact provide the core reason for the existence of associations. Management and workers of associations are supposed to serve their needs, and to adhere to the outcome of collective decision processes between those members (what Streeck & Schmitter (1985) called 'organizational concertation'). Also, as these members are considered equal peers, associations are basically horizontal rather than vertical. While management prerogative should dominate governance in hierarchies, some form of democracy should enable the members' collective voice to dominate associational strategies, which should then be implemented by an association's management and staff. But associations are not exclusively horizontal; not only do they have a `logic of membership' but also a `logic of influence' (Schmitter & Streeck, 1981). In the words of Streeck (1992: 105):

> "The 'logic of membership' is governed by the values and interest perceptions of the groups and individuals that an association undertakes to represent, and in particular by both the sense of collective identity and the 'rationality traps' that emerge in collectivities of a given size, spatial distribution, internal composition, resource base and 'primary', informal social structure. The 'logic of influence' consists of the constraints and opportunities offered to associations by their institutional environment, and it is experienced by associations as a set of strategic imperatives, rules of political prudence and norms of reciprocal political exchange that collective actors in a given institutional context have to obey, and to internalize in their structural make-up, in order to be successful.
>
> To achieve sufficient 'relative autonomy' for effective intermediation, interest associations have to build internal structures that respond to both logics equally and simultaneously. An association dominated by the 'logic of membership' resembles a social movement in that it is likely to be organizationally unstable and incapable of formulating and pursuing long-term political strategies. Similarly, an association ruled by the 'logic of influence' is likely to become so closely entangled with the state apparatus, and so strongly identified with its characteristic means of control, that it will appear to its constituents like a state agency; as a result, its capability to mobilize active support from them will decline. The problem is, however, that striking a balance between the two logics is not easy, as they may not always be compatible, and in some cases may even contradict each other."

In terms of actor-centered institutionalism, therefore, associations are an excellent example of composite actors in general and collective actors in particular. They are composite actors as they are a constellation in which the 'intent' of intentional action refers to the joint effect of coordinated action expected by the participating individuals; they intend to create a joint product or to achieve a common purpose (Scharpf, 1997: 54). Associations build the context for action for these individuals, in the same way as the institutional environment builds the context for the association's actions. They therefore have to be analyzed from two perspectives: from the outside as a composite actor that can unilaterally respond to external incentives, and from the inside as an institutional structure (or coordination mechanism) within which internal actors interact to produce the actions ascribed to the composite actor (cf. section 2.2.3). In line with the principle of diminishing abstraction (Lindenberg, 1991), scientific analysis may concentrate on the former as long as that serves to offer an adequate explanation of their behavior; if not, one has to more explicitly focus on their internal dealings[20]. We will discuss the specific types of rules that employers' associations and unions may develop that help shape markets for intermediate skills in the next part of this section.

*Schools*

When analyzing markets for intermediate skills (or education markets in general), there is one obvious additional type of actor that has to be incorporated in the analysis: *schools*. We will discuss them as an actor alone, not as a separate type of coordination mechanism. But it is a peculiar actor in the sense that it is distinctively shaped by different coordination mechanisms. The first and most obvious one is the state. In particular for countries with public (i.e. state) school systems dominating the initial education system, it appears tempting to simply treat schools as a particular type of actor within the state apparatus. In comparative perspective, however, other countries stand out, where most primary and secondary schools are private rather than public organizations. A relevant case in point here is the Netherlands. While there are public primary and secondary schools, the majority of them is private, and they are typically run by a school association[21]. In the sense that they are private, one might then be tempted to treat them as a specific type of hierarchy. At least in the context of this study, one has to be aware of the joint effect of both types of governance mechanism. State regulation also applies to private schools, and as far as schools in the initial education system are concerned, this tends to be almost as detailed as regulation for pubic schools; regulation for post-initial training institutions tends to be looser. Furthermore, while it is important to realize that schools share certain characteristics with firms/hierarchies (e.g. they compete for market share), it is just as important to be aware of the differences between schools and firms. Firms employ workers whom they may or may not train

themselves; schools, however, train (future) workers to be gainfully employed by other firms, not for themselves[22]. In terms of markets for intermediate skills, firms will typically operate on both the demand and the supply side of that market, while schools operate exclusively[23] on the supply side.

*A governance approach to markets for intermediate skills*

To sum up: we have identified four coordination mechanisms (market, state, associations and hierarchies) and six types of actors (individual workers, individual employers, the state, employers' associations, unions, and schools) to be employed in our analysis of markets for intermediate skills. In analyzing these markets, our aim is to identify the specific *governance regime* governing particular national (and, within them, sectoral) markets for intermediate skills. Regimes of economic governance differ in the way in which these coordination mechanisms are configured (Hollingsworth & Streeck, 1994: 270). The object of comparative empirical research is to determine the relative importance of the various types of governance mechanisms in different contexts, to describe how they are articulated with one another, and to assess the extent and direction of change in regimes over time (Hollingsworth et al, 1994b: 8). Regimes of economic governance vary with spatial-territorial location as well as between functional-economic sectors (Hollingsworth & Streeck, 1994: 271). Variance by location is a consequence of the fact that social institutions are rooted in local, regional and/or national political communities. Variance by sector is caused by the fact that each sector has specific technological and economical characteristics which influence its industrial organization. Just as sectoral differences in technology and market conditions give rise to differences in industrial order within countries, national differences produce different governance regimes within similar sectors in different countries.

This being one part of the analysis in this book, the other part entails analyzing the effect these governance regimes have on the relevant strategic choices made by the aforementioned actors within markets for intermediate skills. The focus here is on the choices of individual (future) workers (what types of training and jobs they pursue) and employers (work organization, train and/or hire). On this level, in particular state regulation and possibly regulation by employers' association and unions will provide an incentive structure within which these individual actors operate. But the analysis is explicitly multilevel. For one, this means we will also attempt to explain obvious differences at the sector level, either within or across nations. For another, it is not just macro and meso level regulation that shapes the choices for individual actors; the relatively stable choices of individual workers and employers (e.g. for German ones, to train apprentices on a large scale) simultaneously shape choices at the meso and macro levels. A state faced with firms up to now massively neglecting their apprenticeship system faces a different opportunity structure from

a state faced with massive participation by firms in such a system.

To further illuminate this approach, we want to point out the similarity with Fligstein's (1996) political-cultural approach to markets. He uses "...the metaphor 'markets as politics' to create a sociological view of action in markets" (Fligstein, 1996: 656). This metaphor has a double meaning. First, it sees the formation of markets as part of state building. Second, it sees markets as reflecting two kinds of political processes: within the organizations that participate on the market, and across these organizations. Fligstein proposes the concept of a 'conception of control' to summarize the core orientation of actors in a market (Fligstein, 1996: 658):

> "...understandings that structure perceptions of how a market works and that allow their actors to interpret their world and act to control situations. A conception of control is simultaneously a worldview that allows actors to interpret the actions of others and a reflection of how the market is structured. Conceptions of control reflect market specific agreements between actors in firms on principles of internal organization (i.e. forms of hierarchy), tactics for competition or cooperation, and the hierarchy or status ordering of firms in a given market."

The term 'conception of control' will prove useful in analyzing national (and sector-level) differences in actor's choices in markets for intermediate skills.

*Differentiation of education and labor markets and the role of associations*

Having identified relevant institutions at the macro level (coordination mechanism) as well as relevant actors to be included in the analysis of market for intermediate skills in this book, what remains is to identify some specific relevant institutional configurations shaping these markets.

We have identified labor market differentiation (segmentation) as the result of the individual preferences of employers and workers (section 2.3.5.3), and differentiation of education markets in general and VET in particular as both a logical consequence of labor market segmentation, and (once established) a new reinforcing cause of this (section 2.3.6.2). Earlier in this section, we hinted at the role of associations (employers' associations and unions) as potential additional, institutional causes for such differentiation. Employers' associations and unions may try to formulate standard job descriptions for their markets. For employers' associations, this may be a tool to enhance effectiveness and efficiency for training in their sector, by achieving economies of scale and/or scope beyond what individual firms may achieve, and/or by trying to help prevent underinvestment in training by their members because of the prisoner-type dilemma they face in training

decisions. For unions, this may be a way to strengthen their workers' employment security. There are alternative ways to achieve this. Craft unions, for instance, have often tried to capture particular types of skills markets, and limit outsiders' access to those markets. Industrial unions, alternatively, try to organize workers across a broader range. While some specialization among their constituents will still be necessary, they will (other things being equal) have a lesser incentive to put up strong boundaries between various skills market niches (as that would exclude some of their own members from these niches), and a stronger incentive to therefore ensure the existence of sufficient general training elements, to provide their workers with the potential for cross-occupational mobility, at least within the sector.

Based on the German case, Streeck et al. (1987: 4) distinguish four basic ways in which associations can be involved with initial VET and post-initial training:

- regulation: the determination of objectives, subjects and standards of training;
- financing: the mobilization of financial resources for training;
- implementation and administration;
- supervision and control.

In addition, employers' associations and unions are indirectly involved in the operation of the German VET market. They jointly negotiate binding minimum wage levels for their members in collective bargaining agreements, which are typically extended to non-members in the same sector. Soskice (1994) points out that it is exactly these high wages that necessitate larger and internationally competing firms to effectively train their new recruits in order to allow them to acquire a high level of productivity that warrants these high wages. At the same time, comparatively low apprenticeship/trainee wages make it worthwhile to direct an important share of firms' training investments to apprentices rather than to regular workers, as the formers' lower wages help to keep down training costs.

Collective bargaining agreements thus are an important tool at the discretion of these associations to pursue such goals, since they can provide regulation for their members that is just as binding as state regulation. And when bargaining agreements are extended by the state, they will even bind non-members. Prominent, specific types of arrangements that may be included in collective bargaining agreements to pursue the aforementioned strategic goals are:

- occupation and/or job descriptions, which may or may not include specific binding entry requirements for such occupations/jobs;
- workers wage scales and apprentice/trainee wage scales, which jointly influence the training costs for various categories and may therefore influence training decisions by both firms and (future) workers;
- apprenticeship or other sector training systems, the former usually in congruence with relevant state legislation;

- links between apprenticeship or other types of education credentials and minimum pay levels;
- sector training funds or other financial arrangements stimulating training.

It is important to note that these same arrangements could in principle be created by the state. While direct state interference with (private sector) wage setting is rare, job entry requirements still function in specific market niches – medical professions being a prime example. And France provides an example of national state regulation forcing firms to invest a certain percentage of their means in worker training.

*Occupations and types of labor markets*

Having outlined some important options for collective action through associations in markets for intermediate skills, we have to revisit the topic of internal labor markets discussed in section 2.3.5.4. Or rather, having sufficiently discussed internal labor markets there, we have yet to discuss an alternative type of institutional labor market configuration discussed by a vast body of literature: occupational labor markets.

The occupation, in itself, is an important institutional labor market concept with two important but different connotations. On the one hand, it reflects the fact that labor market mobility by workers across their careers is generally not confined to the boundaries of one specific type of job (e.g. a milling machine operator), but to a substantial share takes place within broader boundaries (e.g. the field of machining, with workers routinely moving between milling and turning operator jobs). This fact is generally taken to imply that (initial) VET should not be as specialized to exclusively train for either milling or turning jobs, but aim training at a group of related jobs – an occupation. Occupation, therefore, denotes a range of similar jobs between which horizontal worker mobility tends to be relatively easy and prevalent. On the other hand, the concept of occupation is simultaneously used to reflect on vertical worker mobility. Workers do generally not remain on the same job rung throughout their career, but will occasionally move to another (usually and ideally, higher) job rung. Again, this type of mobility tends to occur between somewhat related jobs (e.g. a machinist will more often be upwardly mobile to become a foreman in a metalworking plant than at a construction site). In relation to VET, the concept of occupation then is taken to imply that (initial) VET should not just exclusively prepare youths and young workers adequately for their first job, but simultaneously strive for a more ambitious goal: to lay a promising basis for a fruitful *career*, including the potential for upward mobility to related jobs.

The concept of occupation has a different meaning in different languages and different states. Stooß (1994) points out that the German 'Beruf' can hardly be

translated in other languages, because the German concept simultaneously implies various dimensions. The literal translation of 'Beruf' in other languages (occupation, 'metier', 'beroep') hardly ever implies all these dimensions. 'Beruf' implies five dimensions in German (Stooß, 1994):

- 'Berufe' are bundles of personal skills and experiences that exist in society, between which young persons have to choose for the development of their labor capacity;
- 'Berufe' are frameworks for the structuring and steering of the labor market, and as such, they are a model for the exchange of labor for reward, social security and social integration;
- 'Berufe' are representations of social reality and of organizational forms of labor;
- 'Berufe' offer individuals the chance to develop a personal identity, to accomplish their interests and find satisfaction in their work;
- 'Berufe' are activities aimed at income acquisition; simultaneously, individuals contribute to the national economic product through these activities.

These dimensions are not a matter of language alone; they stem from/are reflected in institutional realities. In Germany, for instance, the use of the word 'Beruf' is not limited to traditional economic sectors (as is the case in many other countries), but expands across all economic sectors. And it not only has meaning for the organization of economic activity and the labor market, but also plays a vital role in the organization of VET and social security (cf. sections 3.5.2 & 3.6).

The concept of occupation to conceptually organize jobs has a direct relation to the notion of so-called *key qualifications*[24] to organize skills. Mertens (1974: 40) introduced the concept as follows:

> "Key qualifications are those that relate to such knowledge, abilities and skills, that do not have a direct and limited relevance to specific, separate practical tasks, but much more a) achieve the capability for a large number of positions and functions as alternative possibilities at the same time, and b) the capability to master a sequence of (mostly unforeseeable) changes in requirements over the life course."

Sengenberger (1987) has incorporated the possibly important role of occupations in labor market careers and labor market governance in a distinction between three types of labor markets. Besides distinguishing internal labor markets from external ones, he distinguished two different types of external markets. One is unorganized labor markets, which come close to the 'structureless market where all jobs are open to all bidders at all times' that Kerr (1954) mentioned. In the other, occupational labor markets, jobs are not open to all bidders but (formally or informally) require

an occupational qualification that allows workers to move to another firm while remaining within their occupational specialization. As with internal labor markets, there are a host of alternative definitions of occupational labor markets, and there are labor market typologies with more types than those three, and/or different definitions of these types. As we will limit ourselves to the three types as put forward by Sengenberger in this book, we abstain from discussing that body of literature here.

*Linking education and labor markets: intermediate arrangements*

Collective bargaining agreements and types of labor markets, while quite relevant for markets for intermediate skills, have in common that they are more general institutional configurations governing labor markets. We now turn our attention to institutional arrangements specifically aimed at bridging the institutional differentiation between education and labor in two separate systems. Such institutional arrangements have been labelled 'intermediate arrangements' in Dutch literature (Van Wieringen, 1984; Kraayvanger & Van Onna, 1986). Kraayvanger & Van Onna (1986: 5) distinguish between a formal and a strategic approach to intermediate arrangements. The first simply asks whether there isn't some coherence behind the variety of intermediate arrangements that have developed empirically. The strategic approach goes beyond that, and asks whether the effects sought through intermediate arrangements shouldn't be achieved through the regular education system or labor market; it moves the discussion to the level of separate and shared responsibilities of state, employers, workers, schools and other actors.

Kraayvanger & Van Onna (1986: 6-8) present two definitions of intermediate arrangements, one more narrow, the other more broad. Their narrow definition of intermediate arrangements is: "those training arrangements that are not part of the regular education system or labor market. (…) Intermediate arrangements in the narrow sense are the whole complex of arrangements that try to create supplementary possibilities in the direction of further/different qualification or specific vocational training". Examples are courses for unemployed workers, short courses and private courses. This narrow definition has the advantage of including relatively limited types of arrangements. But as these are quite heterogeneous, the small number doesn't really help. And an important weakness is that the relations between such intermediate arrangements and both education system and labor marker remain largely invisible. Kraayvanger & Van Onna therefore prefer a broad definition of intermediate arrangements, in which they distinguish three additional complexes of arrangements:

- qualification arrangements, that may be part of the regular education system or labor market, such as school-based VET, apprenticeship, firm-based training and adult education;

- measures aimed at the reduction of unemployment, such as subsidized employment;
- the complex of negotiation, counseling and coordination structures regarding education, training and labor market, such as regional and sector-wide multi-party organizations and forums (e.g. collective bargaining settings).

The analysis in these books does not specifically deal with measures aimed at the reduction of unemployment. It does deal with the other two complexes, but sets some specific accents that have already been pointed out in chapter 1, and will be discussed below. Regarding qualification arrangements, the focus is on work- and school-based VET, their mutual relations, and linkages to the labor market. Regarding negotiating, counseling and coordination structures, we have already pointed out the relevancy of collective bargaining agreements in general; we have yet to discuss specific types of such structures targeted at VET exclusively, in particular, skills standards systems.

*Sequential and parallel institutionalizations of the school-to-work transition*

School-based VET and apprenticeship represent two basically different approaches to the school-to-work transition, with different roles for firms and schools. With school-based VET, schools train young persons that enter firms upon graduation. With apprenticeship, youths (apprentices) work in a firm (usually for four days a week) where they simultaneously receive training, while receiving related instruction at a school (usually for one day a week). This causes a different type of school-to-work transition than with school-based VET. Young people here seek employment with a firm before the start of a training program rather than after their graduation from it. Instead of the *sequential* institutionalization of the transition from education to employment as an (instantaneous) transition from full-time school participation to (typically) full-time employment, as implied by general secondary education and school-based VET, apprenticeship therefore implies a *parallel* institutionalisation of labor market and school participation (school-based related instruction, usually for one day a week). This way, apprenticeship in itself constitutes a separate transitional labor market, in line with transitional labor market theory (cf. Schmid, 1992; 1998; 2000; Van Lieshout & Wilthagen, 2002). Transition from education to employment through apprenticeship is thus a two-step process. First, there is a transition from (general) secondary education into the apprenticeship ('first threshold'); second, there is a transition from apprenticeship into 'regular' employment ('second threshold'). Transitional labor markets (TLMs) should ease the second transition, and apprenticeship is generally found to do so for the education to employment transition, and is applauded for it (cf. Schmid, 1992).

Both models not only entail different roles for schools, firms, and young people

(full-time students in sequential models, part-time students but more predominantly, workers in a typical apprenticeship system), but also for states. For instance, most states fully sponsor full-time VET schools, while firms sponsor a large part of apprenticeship training. And unions and employers' associations usually fulfill important governing roles in apprenticeship systems that they generally do not (or at least not to the same extent) fulfill in school-based VET.

While these differences between sequential and parallel models are important, one has to note that apprenticeship and (completely) school-based VET in fact are just two extreme poles between which various alternative combinations of work- and school-based VET components are possible. One relevant example is provided by the Netherlands, where all school-based upper secondary VET currently has to include a work-based internship component of at least 20%. The difference between Dutch interns and Dutch apprentices is that the former are (mostly) formal workers of their training firms, covered by collective bargaining rules, while the former 'just' enjoy trainee-status, and remain full-time (school) students.

*Skills standards systems and examination*

As mentioned in chapter one, one important trend that stands out in countries as different as the Netherlands, the U.S., the U.K. and Australia is the creation or improvement of so-called national skills standards systems. These are systems that distinguish groups of jobs that require similar skills, and define a set of basic/ typical skills required for the adequate performance of (and admission to) such jobs. Beyond this basic similarity, national skill standards systems show a wide range of variation along a number of dimensions (cf. Wills, 1994d; Finegold, 1997). For instance:

- they may be related to one specific training system (e.g. an apprenticeship system) or not;
- (as a consequence) their scope may cover an entire economy or just some general levels of qualification (i.e. intermediate) and/or economic sectors;
- they may or may not be binding for (some) training providers;
- they may or may not be related to a specific type of assessment;
- they may be developed by different bodies and through different processes.

Skills standards systems make information on the contents of training programs and the skills required for jobs readily available, and link the two. Skills standards are not only relevant for (future) workers, but also for firms. If skills standards are linked to certain training programs, and even more so if the completion of such programs is reliably certified, this may reduce the information problem firms face when screening outsiders. When they have ascertained what particular certificate (best) matches the job for which they have a vacancy, they can make an important

first step in the selection of all (potential) recruits by limiting them to those who have such a certificate. And when the certificate comes along with some kind of reliable indication of how well a particular person has performed in training, and has acquired various specific sets of skills, it also helps them to rank all those with the same certificate. Hence, besides skills standards, examinations/tests as well as the extent to which their results are reliable and comparable across all people that have a similar certificate, are also important.

### 2.3.7 International differences in markets for intermediate skills: statistics

Comparing countries, one finds surprising differences in terms of the qualifications of the workforce, the dominant pathways to the acquisition of intermediate skills, and patterns in the school-to-work transition. Surprising, because these differences can be relatively large between countries on a roughly similar level of socio-economic development – such as the U.S. and Germany. We will explore some of these differences below. Data[25] are generally presented for the mid nineteen nineties, to ensure the closest correspondence with the time of the fieldwork in the various countries.

We will start with the differences in unemployment performance of the three countries (table 2.1). It is common knowledge that the U.S. has had very low unemployment figures across the nineties, while Germany on the contrary suffered from persistent unemployment problems after reunification. Dutch unemployment decreased across the same decade, bringing it closer to American figures in the latter half of the decade.

But behind these general unemployment differences lie very different patterns for the distribution of unemployment over age groups. Germany has a distinct advantage in the relative share of youth unemployment in total unemployment over the U.S., both for young people in their late teens and for young adults in their early twenties. The difference would have been even more pronounced had we included data for former West-Germany rather than for reunified Germany. The Netherlands occupies a middle position, except for males in their early twenties, where it performs a little worse than the U.S. These data help explain the broad international interest in the German apprenticeship system (chapter 1), exactly and primarily because comparative youth unemployment figures indicate that it provides a remarkably adequate school-to/work transition.

Table 2.1: Unemployment percentages for different age groups in Germany, the Netherlands and the U.S., 1994

| | | Standardized total | 15-19 year | 20-24 year | 25-54 year | (2)/(4) | (3)/(4) |
|---|---|---|---|---|---|---|---|
| Germany[1] | Men | | 5.8% | 9.0% | 6.9% | 0.84 | 1.30 |
| | Women | 11.7% | 6.8% | 8.7% | 10.3% | 0.66 | 0.84 |
| Netherlands | Men | | 16.0% | 12.4% | 5.6% | 2.86 | 2.21 |
| | Women | 6.8% | 12.0% | 7.8% | 8.0% | 1.50 | 0.98 |
| US[2] | Men | | 19.0% | 10.3% | 4.9% | 3.88 | 2.10 |
| | Women | 6.0% | 16.2% | 9.2% | 5.0% | 3.24 | 1.84 |

*Source: OECD (1996b), p. 198 (column 1) and p. 114 (column 2-4).*

[1]Data on Germany apply to reunified Germany and the year 1993; unemployment data applying to just the territory of former West-Germany would be lower.
[2]The youngest age group is comprised of 16-19 year olds in stead of 15-19-year olds.

Table 2.2 compares data on participation in upper secondary VET. Data for the U.S. are listed as missing by CERI, as clearly separated general and VET tracks are the exception in American high schools. But with national data estimating the participation in something resembling a substantial VET track in upper secondary education at 9% (NCES, 1994: 65)[26], it is safe to say that American upper secondary VET participation lies substantially below that in both Germany and the Netherlands. Between the last two countries, the most pronounced difference is in the particular type of tracks in which most VET students participate: in Germany, most of them are enrolled in the apprenticeship system, while most Dutch students are enrolled in primarily school-based (MBO) programs.

Table 2.2: Percentage of upper secondary students participating in upper secondary VET, 1994 (student counts)

| | General tracks | Vocational and technical tracks | Of which primarily school-based | Of which primarily work-based |
|---|---|---|---|---|
| Germany | 22.5 | 77.5 | 22.8 | 54.7 |
| Netherlands | 29.8 | 70.2 | 44.7 | 25.4 |
| US | x | x | x | x |

x: Data missing due to the lack of clearly defined tracks.

*Source: CERI (1996: 123).*

Looking at upper secondary *graduates*, comparing them to the theoretically possible number of such graduates, and limiting the analysis to the first track (students may graduate from more than one upper secondary track over their educational career), the general pattern is confirmed (table 2.3). The additional data provided are first, that Germany also outperforms both the Netherlands and the U.S.[27] in the general graduation rate. And second, we find a more pronounced difference between the Netherlands and Germany in VET graduation than we did in VET participation. Drop out rates are indeed higher in Dutch VET than they are in German apprenticeship (cf. chapter 3 and 5).

Table 2.3: Relation between the number of upper secondary graduates and the total population at the theoretical graduation age per education type, 1994; first tracks exclusively

| | Total | General education | VET |
|---|---|---|---|
| Germany | 88.5 | 22.6 | 65.6 |
| Netherlands | 69.4 | 33.3 | 35.3 |
| US | 73.6 | unknown | Unknown |

*Source: CERI (1996: 175)*

Differences in school-to-work transition patterns cannot only be observed at the aggregate national level, but can even be observed for similar jobs/occupations in different countries. Take, for example, the typical route to becoming a bank clerk in the U.S., Germany and the Netherlands in the early 1990s, as evidenced

by interviews with sector experts in those countries. An American bank clerk will typically have received most of his occupational training from the firm that hired him, through on-the-job instruction and some additional short training courses from specialized training institutes in the banking sector. A German bank clerk will have undergone three years of formal apprenticeship training from a firm and a public school for related instruction. And a Dutch bank clerk will have graduated from a four year vocational education track that is primarily school-based (and supplied by a public upper secondary college), but includes an internship component at a bank. It is important to note that such differences are for an important part explained by differences in work organization between banks in different countries. Keltner (1995), for instance, relates the lesser initial qualification of American bank clerks to the lesser performance of American banks in capturing the growth niche of financial advice, as compared to German banks. We will look at international differences in work organization and training in similar firms more closely below.

Besides differences in educational participation and graduation, we also observe differences in firms' training investments in general and particularly in more general types of such training such as apprenticeship training. Of course countries differ in their employment mix, and this will explain part of the difference. German firms, for instance, invest more in formal work-based training than American firms, and a large share of their investments is used to sponsor apprenticeship training for youths (Hilton, 1991). In fact, there is no remaining difference in statistical data on the participation in job-related *continuing* education and training for the adult labor force between both countries (CERI, 1996: 133, table P8)[28]. Comparable data on the Netherlands have not been listed.

### 2.3.8 International differences in markets for intermediate skills: firm comparisons

But the most important line of research shedding light on international differences in firms' skills and training strategies is provided by the work of the (British) National Institute for Social and Economic Research (NIESR) and a network of international colleagues (cf. Prais, 1995a; 1995b for an overview). It has hosted a continuing research program to measure and explain differences in output per capita between Britain and other industrial countries, and to explore their relation to training and education. Its object is to "…estimate differences in manufacturing productivity between Britain and other industrial countries, measure differences in their workforce skills, elucidate the essential differences in their systems of education and training, and, finally, to see what the UK might learn from the way things were done abroad." (Prais, 1995a: i).

The first individual projects within this research program compared the qualifications of the labor force as a whole, and training standards for various

occupations, between Germany and Britain, with unfavorable results for Britain (Prais, 1981; Prais & Wagner, 1983). As a next step, in order to trace the effects of more training on productivity in realistic detail, a series of Anglo-German comparisons at the level of individual plants was undertaken in four industries.

The first series of so-called matched establishment comparisons (MECs) exclusively concerned Britain and Germany, and consisted of four separate studies. The first study focused on the metalworking trades (Daly et al., 1985). Its central object was to cast light on how present-day productivity is affected by differences in the type of machinery used and by differences in the skills and qualifications of the workforce on the factory floor. The researchers visited 16 mainly small and medium size (between 50 and 500 workers) metalworking plants in each country, producing relatively simple products: screws and nuts, small coil and leaf springs, cutting drills, hydraulic valves, and motor parts. Choosing simple products makes it easier to understand the efficiency factors at work on the factory floor than would be the case with complex products like internal combustion engines. In addition, it eliminates the problem of variations in product quality between plants, and makes it easier to measure productivity in physical terms. Besides these 32 plants, they also visited 13 suppliers of machine tools. The matching occurred in several rounds, in order to match as closely as possible. Approximately half of the firms approached who were in comparable trades agreed to participate. In the end, six pairs of plants were found sufficiently similar to warrant a comparison of labor productivity. Calculations were based on actual (not standard) output of machines per unit of time (including downtime). Depending upon how the production process was laid out and on how records were kept, the researchers sometimes only took an important single part of the production sequence, sometimes a series of operations, and sometimes the total number of completed products. The sizes of the batches were broadly similar in both countries. But in all six firms the German firms showed a higher labor productivity varying from a mere 10 percent to as much as 130 percent. The average differential was 63%. While the researchers were prepared to find only a small part of the total productivity differential between both countries to be evident at this shop floor level (especially when looking at relatively simple products), the figures they found in fact corresponded to figures derived from national Censuses of Production. In addition to the higher quantitative productivity of the direct German labor inputs, the researchers also discerned a tendency for the German products to be technically more advanced and of a higher quality. In explaining these differences, the researchers found workforce skills to be more important (at all levels) than machinery. About half of the German workers on the shop floor had an apprenticeship-type qualification, as compared to a quarter in Britain. British machinery was not older than that found in German plants, but it more often lacked ancillary feeding devices, proper maintenance and advanced numerical control devices; and breakdowns were more frequent. The faults caused

by poor maintenance, poor production control, and poor diagnosis of faults have their origins in the technical skills of foremen and operators. Whereas British firms were using less advanced machinery, or were installing more advanced machinery with undue delay, the problem usually lay in a lack of technically qualified management. In sum, skills at both supervisory and shop floor levels were found to contribute to a better choice and utilization of machinery, and higher productivity in Germany.

A second study compared a part of wooden furniture industry in both countries: the production of fitted kitchens (Steedman & Wagner, 1987). Their reason to choose this industry is that, while it relies on skilled workmanship and skilled design, it does not so obviously require the high degree of precision and technical complexity involved in metalworking. No country can be good at everything, and Germany just may have inherited a comparative advantage in precision engineering. So the underlying question was whether the German insistence on formal apprenticeship training of all workers also works to the advantage of Germany with a simpler manufacturing process. Within the industry, there is an important difference in the quality of fitted kitchens. The products of typical German manufacture differed in three ways from its British counterpart. The German manufacturer almost exclusively concentrates on the higher quality end of the market. Even the top range of British producers did not match their German counterparts in quality or variety of color and finish. And the larger German manufacturers (contrary to their British counterparts) were so organized as to be able to make individualized parts to customers' precise dimensions and specifications. Output per employee was known to be about 66% higher in Germany based on national censuses of production. To try to understand this gap, the researchers focused on the central stage in the production process for further examination: the four main operations involved in making the basic panels for the carcass of a kitchen cabinet. They found average output per line and per shift of machined panels not to be significantly different between the two countries, with an average gap of only 6% in favor of Germany. The important difference was in manning levels, which were just over twice as high in Britain as in Germany. Consequently, output per employee on these processes taken together was about 2.3 times higher in Germany. The Germans seemed to have better exploited the potential for economies of scales in this particular part of the industry, while simultaneously producing a more varied product. Again, machinery in Britain was often as new as in Germany, but not as technologically advanced. Fears of maintenance problems and breakdowns inhibited British manufacturers from linking together a series of machines. In addition, German firms had a more systematic approach to the timing of the production of components and machine loading. 90% of German workers had vocational qualifications as compared to a mere 10% in Britain. These provided the seedbed for introducing advanced machinery and advanced production methods, putting them into smooth operation, and fully exploiting their potential. So even with simpler products than in precision engineering, there are advantages to high

levels of skill to take advantage of new production technology.

The third study concerned clothing manufacture, which was chosen for similar reasons as the wooden furniture industry: do the broadly similar conclusions from the previous two studies hold good for even simpler industries (Steedman & Wagner, 1989)? Clothing seemed an appropriate industry for this purpose, as the basic sewing machine is cheap, has only made modest technological progress, and basic operations can rapidly be mastered even by school leavers. Within the industry, the researchers confined themselves to the production of women's outerwear, and, as far as possible, on plants producing skirts, jackets, suits and blouses. German manufacturers were found to rely on producing small batches of high quality goods in great variety; British firms to a very great extent on manufacturing very long runs of standard items. The typical length of a production run was 150-300 garments in Germany, and a hundredfold larger in the majority of British plants. As in wooden furniture, German products were typically more stylish and of higher quality: they often consisted of more separate pieces, were made of a checked or patterned material, and had more decorative stitching and other detail. The number of garments produced per worker per day varied greatly over all 22 plants, from just over one per day to as much as 14. On average, very little difference was apparent, with British firms producing just under, and the German just over 5. But the German plants thus incorporated a higher quality in work-content in the same number of garments a day. And when comparing average output per employee in a sub-sample of plants producing more closely comparable garments in similar batch sizes, German plants produced roughly twice as many garments per employee. Despite the fact that machining is the most labor-intensive part of the process and there are limits beyond which machining speeds cannot be increased, the average machinist output was 40% higher in the German sub-sample[29]. German machines were on average younger than British ones. But it seemed that it was not so much these newer machines, as their specialized adaptation in Germany, presumably due to the greater involvement of plant maintenance mechanics and technicians in production planning, which explained the difference. Over 80% of German machinists had completed two- to three-year vocational training courses, while there was not a single machinist that was qualified in the British sample. This was evidently a major reason for the German productivity advantage: German trained machinists reached full productivity more rapidly, required fewer fault-finders, and less unpicking of bad work. There were similar differences at higher levels of qualifications too.

The fourth and final study of this first series presented a first attempt to examine a branch of the services sector: hotel-keeping (Prais et al., 1989). The first goal was to establish whether there actually are international productivity differences in a service industry similar to those previously observed in manufacturing. And, as this turned out to be the case, the second goal was to see whether education and training in apparently simple and straightforward activities involved in hotel-keeping

(reception and housekeeping) contribute to higher productivity. This question is particularly relevant, as various observers on the German apprenticeship system have conceded that this has its advantages in manufacturing and construction, but doubt whether it is suited or necessary for (simple) service industries. Researchers concentrated on the central range of hotel sizes (10-100 rooms), and to hotels in large towns. The samples were not only matched for hotel size, but also for quality. The researchers had to ensure that German and British hotels didn't offer substantially different standards of service, and that differences in their restaurant sides were not of different average importance in both countries. They controlled for quality by following the grading of the Michelin guide (and limited the sample to two medium quality grades of this) and eliminated employees involved in the provision of all meals except breakfast. Average labor requirements were about 50% higher per guest night in London, and about twice as high in large English provincial towns than in Germany. Findings thus are that the productivity difference in this service industry is not lower but (if anything) slightly higher than in manufacturing as a whole. The main difference again stems from qualified manpower. In the German sample, 35% of all workers had craft-level qualifications, as compared to 14% in the British sample. Almost all German workers in management, reception and at the supervisory level in housekeeping had such qualifications. In Britain, it was less usual in management, rare in reception, and hardly ever apparent in housekeeping supervision. And the greater breadth and practical content of German vocational qualifications in this area as compared to British qualifications proved to be better suited for the middle range of hotels, where flexibility is an essential part of the daily work for all personnel. Chambermaids in both countries were unqualified. But thanks to better work organization by their (in the German case vocationally qualified) supervisors, their productivity was higher in Germany. Differences in total spending on capital equipment were less important. The most important differences found were more appropriate computer packages in reception areas, the greater use of chambermaids' trolleys, and a better choice of labor-saving fixtures and fittings. These reflected the greater practical element in managerial training in Germany.

The interesting findings of this first series of MECs triggered more to come. Having established the inferior British performance relative to Germany in four different industries, one logical step was to extend the method to encompass other countries. The first of these was the Netherlands; two Anglo-Dutch MECs were carried out, one in engineering, the other in food processing (Mason et al., 1992; Mason & van Ark, 1996). This engineering comparison was later extended to include the U.S. (Mason & Finegold, 1995), while the food processing comparison was extended to include France and Germany (Mason et al., 1993). Secondly, new and different industries have been added. Besides food processing in the aforementioned studies, this particularly concerns the service sector: insurance firms, and banks lending to mid-corporate ('middle market') business customers. And, interestingly enough, the

method has also been applied to various manufacturing industries (engineering; food, drink and tobacco; clothing; furniture) in two regions of one (reunited) country: East- and West-Germany (Hitchens et al., 1996).

In the food-processing comparison, which concentrated on the production of biscuits, the original Anglo-Dutch comparison showed a Dutch comparative advantage (in terms of tonnage) of 21% per man-hour. But researchers also observed that the British plants produced a higher proportion of simpler undecorated varieties and a smaller proportion of more complex (filled or chocolate-coated) varieties, which involve more production processes; those varieties that account for the most expensive 15% of the tonnage produced in the Dutch sample accounted for only 5% in the British sample (Mason et al., 1992: 51; 60). As such differences were found of even greater significance in the extension of this study to France and Germany, this led the researchers to develop an explicit measure for the quality of biscuits. When differences in quality were neglected, the Dutch plants had an output that was some 25% higher than in British and French plants; these in turn had a 25% advantage over Germany. But the detailed information gathered enabled researchers to classify the outputs of all 29 plants that were visited in the four countries into three different grades of product defined in terms of technical characteristics such as the number of processes involved in their production and the types of ingredients and packaging materials used. These enabled them to estimate inter-country differences in average levels of product quality, by weighting the different quality-grades produced in each country by the retail price ratios. And when adjusting for quality differences this way, quite different results emerged. Productivity was found to be highest in Germany: on average, German productivity was about 15% higher than in the Netherlands and France, and 40% above the British levels (Mason et al., 1993).

In the Anglo-Dutch-American precision engineering comparison, potential quality differences were addressed differently, by exactly that step that Daly et al. (1985) chose to forego: looking, not at matched simple *products*, but at matched manufacturing *processes* in the countries (Mason & Finegold, 1995). In each country, firms were identified that produce a particular type of product: centrifugal liquid pumps, industrial hydraulic valves and cold-coiled compression springs. Because each establishment still produced products to a wide range of physical dimensions and other specification, it proved impossible to obtain meaningful measures of total output and labor productivity. Instead, Mason & Finegold (1995) moved on to compare direct labor inputs involved in *specified sequences of operations* in the manufacture of similar individual products: i.e. the coiling and grinding phases of spring manufacture, the machining of key components of pumps and valves, and their subsequent assembly. Detailed information was obtained on actual output rates and direct labor inputs, which led to estimates of the average outputs per direct person-hour. In the end, one compares for example for the machining of a key component of a pump the average machine operation time for that part, divided

by the average number of individual machines a worker operates. Mason & Finegold (1995) have found marked international differences in the organization of work and the qualifications of workers in those key occupations. For instance, American operators on average operate 2 machines, but British and Dutch operators only 1.5; and the percentage of the workforce with no formal educational qualifications and only on-the-job training is roughly 70% in the U.S., 59% in Britain, but only 22% in the Netherlands. The American establishments held a productivity advantage over both their Dutch and (even more so) British counterparts. But these predominantly stem from larger batch sizes and higher automation levels in American firms. In the case of matched machine set-up operations, for example, the actual times required to carry out given sequences of tasks in the U.S. were found to be on average much the same as in the U.K., and about 50% longer than in the Netherlands. The American establishments lacked craft-skilled shop floor workers and supervisors as compared to the U.K. and (even more so) the Netherlands. But the larger scale of production implies that American shop floor workers need much less flexibility (i.e. between different machines and products) than their European counterparts. And, contrary to the lower skills level of frontline workers and their supervisors, American firms have a number of college-trained manufacturing engineers that fulfill a key role in work organization and in remedying day-to-day problems. In addition, a more systematic approach to formal and/or informal on-the-job training in some U.S. firms counters the lack of initial craft training.

The NIESR was not the only one to compare firms within an industry over different countries. Another important line of research concerns the International Assembly Plant Study, carried out by the International Motor Vehicle Program (IMVP) at M.I.T. IMVP originally was a five year research program sponsored by virtually every automotive company in the world, leading to the influential "The machine that changed the world" (Womack et al., 1990). It continued as a center for the study of industrial competitiveness sponsored by the Sloan Foundation, and has since then hosted several waves of the International Assembly Plant study (cf. MacDuffie & Kochan, 1995; MacDuffie & Pil, 1996). Firm choices about production strategy emerge as the primary determinant of training. In particular, training is linked to the overall organizational logic of production, and not just to human resources policies. Technology (measured by a robotics index) does not influence training level. Limited support is found for national differences in training level between production locations, apart from differences in production systems. U.S. firms do invest more in training than their Japanese and European competitors. But ownership seems as powerful a channel for national effects on training levels as production location: Japanese-owned American-based plants train more and U.S.-owned European-based plants train less than locally owned plants. Japanese-owned plants appear to train a lot because they rely heavily on flexible production, European-owned European plants and plants in the newly industrialized countries

train more than their production approach would predict (MacDuffie & Kochan, 1995).

Quack et al. (1994, 1995) have compared the developments in recruitment and training practices in German, British and French banks, based on a number of interviews with personnel and training managers in major banks in the three countries. Not surprisingly, these were quite different, reflecting different national education and training institutions. More surprisingly, while often similar pressures lead to changes in all three countries, change is occurring in different ways in each country. Part of this may again reflect traditional differences in national education and training institutions. But the important point is that these latter institutions themselves are also undergoing change, and that banks are often actively involved in getting institutions and regulations adapted to their own needs. Quack et al. (1994) conclude that the sectoral level is an important arena where actors negotiate changes in regulatory systems between the firm and the national level. However, this does not only apply to education and training institutions, but sometimes also to key issues in the organization of production/service delivery. This appears particularly relevant in banking. Contrary to manufacturing, where each firm is solely responsible for the quality of its own products, in banking, product quality to some part is crucially dependent upon mutual cooperation. For instance, my ATM card will be more valuable to me if I can use it at any banks' ATM. The history of product and process innovations in the automation of financial transactions in the Netherlands provides a good illustration of the delicate relations between firms' individual strategies and their joint cooperation (Tijdens, 1992). Banks of course pursue their own automation procedures in front- and back-offices, and this has been found to affect the qualitative mix of their labor demand (De Grip & Groot, 1990). But several key product and process innovations, which decisively influence changing labor demands, could only be achieved through cooperative efforts at the sector level.

Keltner (1995) interviewed 60 bank executives and managers in Germany and the U.S., as well as several industry consultants and representatives of employers' associations and unions. He tries to "…explain the contrast between the stable market position of German banks and the declining fortunes of their American counterparts…" (Keltner, 1995: 45). While external factors have a role to play (e.g. the fact that American banks were only allowed to enter the rapidly growing markets for investment and insurance products at a relatively late date), Keltner stresses the importance of banks' own strategies and choices. German banks invested heavily in human capital and the organizational capabilities necessary to pursue a strategy of 'relationship banking'. Extensive apprenticeship training and ample opportunities for upward mobility of their employees were crucial parts of this strategy. And by offering their customers high levels of financial advice, quality service, and the convenience of one provider for financial products, they have managed to retain

their competitive position relative to other suppliers of such services. American banks invested heavily in information technology and rationalizing employment, but in the process lost some things that proved to be main sources of competitive advantage: advisory quality, and customer contact as a means to generating market information. They chose to compete on price and convenience, and their customers found that other financial providers could do as well in these areas. One lesson to be learnt from this study is that high labor productivity in contemporary tasks, while important, is not the only relevant economic performance criterion for a successful human resources strategy. In line with Keltner's analyses, Paauwe & Williams (1998: 71) see banks gradually turn into labor intensive firms where a large share of the employees has an important effect on a bank's economic performance.

The importance of this literature, and the reason to discuss it so extensively here, is, first, to caution the reader for a naïve technological determinism in thinking about the relation between technology, work organization and training. Technology does not (completely) determine work organization, which does not (completely) determine training. Firms have ample scope in defining their own strategies in these areas. Similar machinery allows for quite different forms of work organization in different firms, which in turn may lead to quite different structures of firms' labor demand (in terms of workers' qualifications). This makes for differences between similar firms within a country; but of more particular interest to our purposes here is the apparent correlation between certain types of work organization, institutionalization patterns of training, and firms' strategies with nations. The separate cases of different sectors show such patterns for those separate sectors; but the multitude of such studies comparing British and German firms shows similar national differences across quite different sectors. National characteristics, such as education and training institutions, influence firms' choices in these respects. However, as national institutions do not dictate work organization any more than technology does, there will still be substantial variation across firms within a country. In particular, we see important differences in the role and operation of internal labor markets within firms. Various types of rule such as wage systems, job classifications, and rules regarding employment security tend to fit together in a more or less coherent system, representing the overall human resource management strategy of a firm (Osterman, 1994). Again, to some extent national characteristics seem to be involved. German firms, for example, have better job security, a stronger influence for employees through workforce councils, lower ratios of supervisors to frontline employees, and more emphasis on formal skills-based training than their American counterparts. This way, firms and their strategic choices are a crucial intermediary variable between qualifications and economic performance.

Concerning the nations analyzed in this book, the aforementioned literature points out that apprenticeship may have an additional advantage for Germany above the low level of youth unemployment and the adequate school-to-work transition:

it may help German firms in maintaining a high-quality competitive strategy in international markets. The U.S. and the Netherlands have, unfortunately been included in substantially fewer of such studies. Based upon the material available, Dutch (metalworking and food-processing) firms seem to more closely resemble the German patterns of well-trained and adequately skilled frontline workers enabling a high productivity and high product quality. The overall American productivity advantage seems to be caused predominantly by the large scale of production and subsequent economies of scale; skills levels of frontline workforce are generally below those of their German and Dutch counterparts, although an active approach to on-the-job training may counteract these differences.

Finally, this line of research also provides a nuanced view of the relation between training and economic success. Education and training are considered of increasing importance for the competitiveness of firms, economic sectors and nations. With shrinking trade barriers and increasing international competition, the qualifications of the workforce are one of ever fewer remaining instruments to enhance competitiveness. Keltner (1995) provides an example of how a lower skills level may cause firms to (relatively) miss out on certain market opportunities.

Finegold et al. (1994) show work organization and (low) skills levels to be factors that played a role in the decline of the competitive position of the once superior American machine tool industry over the nineteen eighties. Even while this industry itself had come up with the most important technological innovation in the sector (computer-numerically-controlled machines), Japanese and German[30] firms came up with more successful productive strategies in using such machines. Competition is pretty global in the machine tool industry, and the technology is worldwide available. Around 1980, the competitive position of American machine tool firms seemed excellent. Surprisingly, the production volume of the American machine tool industry then sharply decreased in the early eighties, and stabilized at that lower level. Simultaneously, the production volume of the German and, even more so, Japanese machine tool industry grew. The American *import* of foreign machine tools rose in just seven years from 24% to 54%! Several factors are held responsible for this dramatic collapse of the American machine tool industry; international differences in the skills level of frontline workers and supervisors and work organization figure prominently among them. Finegold et al. (1994) list four factors that particularly caused Japanese and German firms to opt for a 'high skills' strategy: a well functioning general education system; labor market structures and industrial relations that discourage poaching of skilled workers; a high skill level among workers of client firms using the machine tools (that stimulate machine tool firms to develop tools that use those skills); and high labor/dismissal costs that discourage them from a 'low cost' strategy.

To balance the picture somewhat: while the German institutionalization of markets for intermediate skills is held responsible for the relative success of its machine tool

industry over the eighties, it has not prevented its own crisis over the mid-nineties (Herrigel, 1989; 1994; 1996). Herrigel (1996) makes the controversial statement that apprenticeship itself now hampered these firms to adapt to new competitive challenges. Specifically, the high degree of specialization of skilled workers and the narrow functional orientation of managers from different disciplines hamper the establishment of multi-functional and integrated product teams. As I did my German interviews with metalworking firms in the same German state around the same time, I witnessed that establishing multi-functional and integrated product teams was indeed a key and problematic issue there at the time. But the apprenticeship system itself did not appear to be an important cause of the problem. Herrigel neglected the important broadening of metalworking training occupations as early as the seventies, when the number of occupations had already been drastically reduced, and a common first training year across the new occupations was established (cf. chapter 3). If anything, necessary changes in this direction within apprenticeship significantly preceded this crisis, so apprenticeship rigidity can hardly be blamed here. The problem as I perceived it was more one of workers identifying with their current jobs, and hesitant to organizational/occupational change. Finegold & Wagner (1997) confirmed that German pump manufactures were slow to adapt to the new work organization, but also point out that they have come up with alternative ways of work reorganization that may prove equally successful.

The point here was, therefore, certainly not to argue the overall superiority of high skills strategies over low cost strategies; but just to show that skills strategies may have their consequences in terms of economic performance, which may or may not offset differences in labor costs; and, perhaps even more importantly, to show that the success of various strategies may vary over time. It is wise, therefore, to distrust analyses that argue that economic conditions *force* firms/workers/nations to pursue one and only one particular type of strategy in order to be successful.

### 2.3.9 Skills equilibriums

Having outlined relevant actors and institutions that jointly constitute different governance regimes, the cream on the pie is still lacking: a concept to identify broad differences between various markets for intermediate skills, in the sense of a field-specific concept with which to label broadly different outcomes of different governance regimes for such markets.

Finegold & Soskice (1988) have introduced the concept of a skills equilibrium to analyze national markets for intermediate skills, and the differences between them. The term equilibrium refers to a self-reinforcing network of societal and state institutions, which interact to influence the demand for improvements in skills levels (Finegold & Soskice, 1988: 22). This network includes the organization of industry, firms and the work process, the industrial relations system, financial markets, the

state and political structure, as well as the operation of the education and training system. Two kinds of skills equilibriums are distinguished. In the aforementioned article, Finegold & Soskice analyze the U.K. as a low-skills equilibrium: a country in which the education and training system has delivered badly educated and minimally trained school-leavers to an economy which has been geared to operate with a relatively unskilled labor force (Finegold & Soskice, 1988: 49). Soskice (1994) uses the concept to analyze the most famous counter-case: the German high-skills equilibrium. These analyses do, obviously, not preclude that individual firms or citizens succeed in taking different paths; there are highly skilled British workers and low-skilled German firms.

The most important merit of the concept of a skills equilibrium does not lie in the exact 'measurement' of the performance of markets for intermediate skills. Labeling national VET markets as either a low- or a high-skills equilibrium is not very exact[31]; and Finegold and Soskice were but two in a long line of (in particular, British) scholars to observe British weaknesses in skills of the labor force as compared to other countries in general and Germany in particular, nor do they offer the most compelling evidence of the German advantage in this field[32]. Instead, the most important strength of the skills equilibrium approach lies in its ability to offer a comprehensive explanation of how and why a particular equilibrium exists within a particular country, and what institutions help to explain its self-reinforcing tendency. Its analyses point out how the specific institutionalization of a particular national market for intermediate skills (in the low-skills case) discourages or (in the high-skills case) encourages firms and citizens to invest in training. In countries where institutional incentives to invest in training are low, firms have to work with a relatively low-skilled workforce. This fact will bias most of them to production or services they can accomplish with those skills; and that fact then creates a feedback effect from the current labor market demand on the current training level. In a low-skills equilibrium, where most firms do not demand too many skills, there is less reason for young people to heavily invest in education and training than in a high-skills equilibrium. There, the high supply of skills will have led many firms to specialize in products or services in which those skills give them a competitive advantage; and the relatively high demand for skills will (*ceteris paribus)* stimulate individuals to embark on more education and training than in the low-skills case. The equilibrium notion implies that a change in any single component of the aforementioned institutional network that constitutes a particular skills equilibrium, without corresponding shifts in the other institutional variables, may result in only small long-term shifts in the equilibrium position. For instance, a state investing in improvements in its education and training system may not be able to reap the full benefits of this if it does not simultaneously address issues in the labor market or the industrial relations system.

One important caveat about this skills equilibrium approach is that it sometimes

has occupied the gray border area between a typology of markets for intermediate skills, and an overall typology of entire national labor markets (including lower and higher skills levels). The reader should be fully aware that, in this book at least, it is exclusively employed to analyze markets for *intermediate* skills. In labeling, for instance, the American market for intermediate skills as a low-skills equilibrium, we imply no more than what has otherwise been noted as the 'missing middle' in the American labor market. We will focus the analysis in the three country chapters exclusively on their markets for intermediate skills. In evaluating the benefits and pitfalls of these markets for national economic and social performance, we will pay attention to the other skills levels. To again use the American case as an example, in evaluating their 'missing middle', one has to be keenly aware of the bipolar development of the American labor and VET market: employment growth and, correspondingly, training, are concentrated both at the higher (college) and lower levels. At least in terms of general economic performance, the U.S. seems (up to now) not to have decidedly suffered from this bipolar approach and its relative neglect of markets for intermediate skills.

Another important caveat is the stability of skills equilibriums. While their short-term stability is essential for the paradigm, and backed up empirically by the relative stability and path-dependency of different national cases of both high- and low-skills examples, the concept would be relatively useless from a policy perspective if it would entirely preclude the possibility of changes to or shifts of such equilibriums. And it does not, nor does it imply that such changes or shifts would necessarily spin a country into disequilibrium. At the turn of the last century, Crouch et al. (1999: 22) have discussed apparent changes to the British low-skills equilibrium. They point to recent initiatives to improve work skills and the skills equilibrium in Britain, the stereotypical low-skills example of the eighties. However: they simultaneously pointed to the lowering of wage and non-wage costs there, in order to enable British firms to better follow the logic of the low-skills equilibrium. Balancing both developments, their actual challenge here is the underlying message in Finegold and Soskice (1988) that countries that would fail to achieve a high-skills equilibrium could find themselves spinning into disequilibrium[33]. As the U.K. was not included in the research portrayed in this book, I will abstain from a discussion of the British case. It is, however, worth noting that, regardless of the empirical developments in the U.K., such an underlying message would have been inconsistent with the skills equilibrium concept to begin with: for it would have implied that, in the long run, only high-skills equilibriums would prove stable, and low-skills equilibriums would not. In that case, why would one even introduce the concept of a low-skills *equilibrium*?

The finer and more interesting point here is therefore that using the notion of equilibriums does not preclude gradual (long-term) change. If one accepts the possibility of multiple equilibriums, it makes perfect sense for at least the *theoretical*

possibility that the one (low) may evolve into the other (high), or vice versa. While most economic analysis in one form or another is based on the notion of an economic equilibrium, it does not preclude the possibility of economic change, either into disequilibrium or into another type of equilibrium, and there is no reason to proceed differently when analyzing markets for intermediate skills with the concept of skills equilibriums. The relative stability of national skills equilibriums over the past decades provides us with an excellent reason to approach international comparisons in this field from an equilibrium perspective. At the same time, these institutional regimes do constantly change in one aspect or another; and while each individual change may indeed result in only small long-term shifts in the equilibrium position, there is no reason to assume that the self-reinforcing nature of institutional regimes shaping such equilibriums will always be as strong as to preclude a particular combination of small changes to result in a shift from a low-skills equilibrium into a high-skills one – or vice versa. An additional advantage of the skills equilibriums concept in international comparisons of the status quo in national markets for intermediate skills is in fact that it identifies particular (combinations of) crucial institutional arrangements that tend to stimulate skills investments (or not), which implies that, at least in principle, a (targeted combination of) changes in these arrangements might influence the previous equilibrium position of a country. The reason for most scholars' substantial skepticism towards swift fundamental change is based on the realization that the actual emergence of a coherent combination of the various individual institutional changes that would be necessary to rapidly shift a low-skill equilibrium into a high-skill one is highly unlikely. To sum up: the use of the notion of skills *equilibriums* does not preclude the possibility of such equilibriums changing over time, but goes to show that such change – if it occurs at all – will typically be slow and gradual. And focusing on the institutional causes for the self-reinforcing inclination of such equilibriums is in fact the most fruitful way to study the possibilities and limits of policymakers' reform attempts in this area.

## 2.4 Epilogue

The proof of the pudding is, as usual, in the eating, in this case the consumption of the remaining chapters. In chapters 3 through 5, we will use the concepts of governance regimes and skills equilibriums, in conjunction with the more specific range of actors and relevant institutional arrangements identified throughout section 2.3, to analyze and compare the institutionalization of markets for intermediate skills in Germany, the U.S. and the Netherlands. Chapter 6 will then reflect back on the reletive merits of using a governance regime approach to analyse markets for intermediate skills.

## Notes chapter 2

[1] The term 'market for intermediate skills' should of course in no way be taken as an implicit reference to an overriding importance of the coordination mechanism 'market'. 'Market for intermediate skills' it is simply the accepted description for the social field that is the object of this study in the international literature. Cf. section 2.3.3.
[2] Steinmo et al. (1992) use the label 'historical institutionalism' to distinguish another, additional type of neo-instutionalism: historical-interpretative institutionalism, which they distinguish from rational choice institutionalism. The label draws attention to another important institutionalist critique of rational choice theories: their neglect of the influence of history on social behavior and events. We will return to this issue later in this chapter.
[3] Cf. the criticism on the old institutionalism in section 2.3.1.
[4] The QWERTY layout of typewriters and keyboards is the celebrated example of a Pareto-inefficient equilibrium outcome: we all have come to use it, though better layouts were available (David, 1985).
[5] Note, however, that a closer look at, for instance, daily operations of an association, such as a union, may reveal that it actually operates along these same lines as separately institutionalized collective and corporate actors. We will return to this topic when discussing associations in section 2.3.6.3.
[6] Of course, it is the 'real' situation (as perceived by a hypothetical fully informed observer with unlimited computational capabilities) and not a perception thereof that codetermines the *outcome* and *payoffs* of the actions chosen (cf. Mayntz & Scharpf, 1995: 58-60).
[7] Individuals often assume several roles on behalf of different reference units. Normally, it will be clear on whose behalf they are acting, but there may be situations where they may evaluate actions from the perspective of more than one reference unit (Scharpf, 1997: 61).
[8] Of course, nothing prevents me us from spontaneously calling a vote in a random crowd. But it would have to be interpreted by the scientific observer as a unilateral action on my part. That act would not suddenly change the mode of interaction in that random crowd from 'unilateral action' to 'majority voting', not even if the crowd, surprisingly enough, would instantaneously comply. In the unlikely event it would, what we have is a case where individual actors all suddenly act the same. In the light of this evident empirical evidence of a sudden similarity of individual choices, actor-centered institutionalism then allows a simpler description of the event in terms of an aggregate actor ('the crowd') and would search for an explanation for the event, in particular the sudden spontaneous similarity (e.g. a shared grief we may have tapped).
[9] This, by the way, explains why in mob movies it is always the little crooks that do not rat on their bosses and go to jail for them, while bosses do rat on other bosses in return for a lighter sentence.
[10] In the Dutch case, in particular private schools for primary and secondary education have room to exclude individuals. This implies that excludability remains relevant as far as it may result in student selection in better and worse performing schools. But this is a different level of analysis than applied in the main text.
[11] Non-competition clauses in labor contracts may sometimes infringe upon this freedom, but they are the exception rather than the general rule in labor markets.
[12] This definition fits the view on actor's orientations in actor-centered institutionalism (cf. section 2.3). Skills are not only a matter of cognitive (and manual) aspects, but include motivational and relational aspects. Together, they form some sort of worker identity, which includes norms and interests stemming from their self-orientation as well as different system-orientations, including those on their firm and their department/ work group.

[13] There are two theoretical approaches to this theme in labor law. There is a contractual approach, focussing on the contract both parties agreed upon, which precludes subsequent unilateral change of job descriptions. And there is an institutional approach, which focuses on the fact that the worker has voluntarily joined a firm when concluding the contract, and that management prerogative may require unilateral changes even if the worker disagrees – provided the changes are just and fair. So even within this second approach, the prerogative is not unlimited.
[14] And these can be quite relevant; take the example of how computer games kids play provide an important basis for their computer literacy that is highly relevant for a growing number of jobs.
[15] Katz & Ziderman (1990) themselves actually use Becker's concept of general training. We have previously outlined why we prefer the concept of transferable training. As their analysis equally applies to transferable training, we prefer to use that term in the main text.
[16] In the main text, we discuss internal labor markets as if they would consist of one single job ladder. As Osterman (1994) notes, over time sensitivity has been heightened to the fact that a firm is not a unitary employment system but rather consists of a set of subsystems that may operate on quite different principles. For example, there often is a distinction between at least a subsystem for clerical workers and one for production workers in a factory. Van Veen (1997) provides a comprehensive empirical study of the internal labor market of a large Dutch industrial firm consisting of a detailed analysis of internal mobility patterns between jobs, and shows the existence of several job ladders even within production departments.
[17] This is where the institution of occupation comes in; we will discuss it extensively in section 2.3.6.3.
[18] In their most radical versions, such theories have proposed that education does not increase the productivity of students. Instead, more talented individuals will just have more success in education systems, and employers simply use credentials from the education system to select the more talented from the rest of the crop. While this version overstates the case for a selection perspective, it is important to be aware of the fact that education systems in fact do serve all three functions (qualification, selection and legitimization). While the theme of legitimization will not explicitly be a factor in our analysis, we will analyze markets for intermediate skills with our eye on both qualification and selection processes, and how they relate.
[19] Other European countries where such a debate continues are France and Italy. Compare Crouch et al. (1999: 114; 126) for an overview and further references for both countries.
[20] The same multi-level character applies to both the state and hierarchies. On the one hand, they are a coordination mechanism that coordinates preferences of individuals into joint decisions and actions. On the other, they operate as composite actors that can act unilaterally *vis-à-vis* external incentives and organizations. Both state and associations share a distinctively democratic shape of their internal make-up; while hierarchies also have one form or another of corporate governance to ensure its actions somehow reflect the interests of its constituents (capital holders and workers), management prerogative within firms generally extends beyond that experienced by Secretaries of State and state department officials, and of managers and staff of associations.
[21] Cf. chapter 5 for a more extensive overview of the organization of the Dutch education system.
[22] With the obvious exception of teacher training colleges, which are not covered in this book.
[23] Obviously schools operate on the demand side in terms of hiring teachers, but as these are supplied by higher education, they fall outside of the analysis of markets for intermediate skills in this book.

[24] There are various related terms with similar but somewhat different interpretations. We abstain from a discussion of these here.
[25] Data are not without their flaws. First, the labeling of various national education types according to various levels is not as perfect as one might hope for. While there certainly is some method to it, debate is possible. For instance, the labeling of Dutch HBO has been upgraded one level between different years of the CERI publication that is the best available source for such statistics. The most important caveat is that such comparisons have to follow the internal logic of national systems. This means, for instance, that (participation in and graduation of) American two-year (community/technical) colleges is interpreted as tertiary level, while the relevant tracks seem to more closely resemble Dutch (upper secondary) four-year MBO than Dutch (tertiary) HBO, in comparison. We leave it at that; the general point here is to show why the U.S. is generally perceived as a low-skills equilibrium and Germany and the Netherlands as high-skills equilibria, and they serve that purpose regardless of such limitations.
[26] As mentioned in the previous note, American two-year colleges are counted as tertiary education institutions while the tracks they offer seem more comparable to the three- to four-year upper secondary VET tracks in the Netherlands and Germany. Including their participants in the count of upper secondary tracks for the US would somewhat narrow the gap, but far from close it.
[27] Note, however, that the percentage of Americans in age groups 25-34, 35-44, and 45-54 with at least an upper secondary education diploma is more than 10% higher (CERI, 1996: 36). The probable explanation is that a substantial share of Americans acquires that qualification when they are a little older than the theoretical graduation age; the institutionalization of the General Equivalency Diploma might play a role here (cf. Chapter 4).
[28] Both countries also show a similar difference in such participation across groups with various levels of educational degrees, with participation for those with just a primary education not over 15%, and that for those with a university education around 50% (CERI, 1996: 133). Participation for those with upper secondary education is a little higher for Germany (28%) than for the U.S. (24%).
[29] Though variability was too great for this difference to significant beyond the 10%-level.
[30] The Italian machine tool industry was even more successful than the German one, and offers an intriguing case because of the relative lack of formal VET. Cf. Finegold et al. (1994) and Crouch et al (1999: 83-84; 100).
[31] To be sure: exact 'measurement' of the performance of national VET markets is far more difficult than the availability of comparative data on education systems and labor markets would seem to indicate, as discussed in the previous section.
[32] In particular the series of matched plant comparisons performed by the London National Institute for Social and Economic Research, discussed in the previous section, offers more compelling evidence of British-German differences. Cf. Prais (1995a; 1995b) for an overview, and section 2.3.8.
[33] Crouch et al (1999: 22) also list several recent changes they observe in the international economy, which raise doubt even on the stability of high-skills equilibriums.

# 3 The German market for intermediate skills

## 3.1 Introduction

Germany has served as a best case scenario of the institutionalization of markets for intermediate skills since at least the 1980s, with the German apprenticeship system as the key institutional figuration to attract this international praise (cf. Chapter 1). While the German economic problems of the 1990s (persistent long-term unemployment in particular), as well as the (so far) unsuccessful attempt to build an apprenticeship in former Eastern-Germany, have jointly dimmed the shine of its success, it still stands as an attractive and intriguing example of the institutionalization of markets for intermediate skills.

This chapter will analyze the governance regime that rules the German market for intermediate skills, and the way in which various actors respond to the incentive structure it poses, which has culminated in a seemingly stable high-skills equilibrium. The chapter is based on extensive field research in Germany in 1994-1995. The analysis is limited to the territory of former West-Germany, since our primary goal for the German case study in the context of this international comparison was to analyze the constitution of a persistent high-skills equilibrium there. The tale of economic transition in the former German Democratic Republic is a different one, and one that implies that the institutionalization of the market for intermediate skills would have to be in a radical transition. While an analysis of such a transition is certainly intriguing, we have decided not to risk our goal of a *thorough* analysis of the West-German market for intermediate skills by a limited excursion into a very different and unsettled Eastern market.

The fieldwork in Germany began with an extended stay at the 'Bundesinstitut für Berufsbildung' (BIBB) for desk research (a review of literature and statistical information) and a first round of expert interviews there. It continued with interviews with experts at the federal level (representatives of the federal government, national peak employers' associations and union federations) as well as at the national sector level (employers' associations and unions in construction, metalworking and banking, cf. Chapter 1). The final stage focused on the state of Baden-Württemberg and included interviews with representatives of state departments, VET schools, employers' associations and unions (state peak organizations and those in metalworking), metalworking firms and various other relevant local organizations. In all, 73 interviews were conducted. The German case study was reported on in a separate report (Van Lieshout, 1996a).

Section 3.2 will portray German socio-economic order, industrial relations and some key aspects of labor market governance and operation. In section 3.3 we will portray the German education system and its various components. Section 3.4 will depict German school-to-work transition patterns. In section 3.5 we will

take a closer look at the governance regime that covers the majority German school-to-work transitions: apprenticeship. Section 3.6 will elaborate on the reasons why apprenticeship attracts so many German youth. In section 3.7 we will elaborate on the reasons why German firms are inclined to provide so many apprenticeship opportunities. Section 3.8 offers some conclusions on the German skills equilibrium.

## 3.2 Socio-economic order, industrial relations and labor market governance in Germany

Among our three countries, the socio-economic regimes in Germany and the Netherlands show a much closer resemblance than either of those with the U.S.. This section will therefore portray the German socio-economic order in general, and industrial relations and labor market governance in particular, from an implicit comparative perspective with their American counterparts. Similarities and differences between Germany and the Netherlands in these respects will be discussed in chapter 5.

### 3.2.1 The German state and socio-economic governance

Germany, to begin with, is a federal state, like the U.S., and like the U.S., much authority is located at the level of the individual states ('Bundesländer'). The German constitution strongly divides authority between the federal government and the individual states; the latter exercise primary powers in areas such as education, environment and the supervision of local government. In contrast to American federalism, however, where the federal government and the states each cover specific policy fields which they administer largely independently from each other, German layers of government to a large extent share power (Katzenstein, 1987). On most policy initiatives, the German parliament ('Bundestag') must reach agreement with the 'Bundesrat', a council composed of representatives of each individual state. In addition, the German term 'Politikverflechtung' (interlocking politics) indicates that federal, state and local governments tend to cooperate horizontally and vertically in bilateral or multilateral political networks.

Germany has a multi-party political system as opposed to the prevailing American political system where two parties alternate in forming federal and state governments. In practice, two German parties (the Christian Democratic CDU/CSU party and the Social Democratic SPD party) have also dominated the political landscape. The difference is that these have tended to govern in coalition governments which generally consisted of one of them and the smaller, liberal FDP. Coalition governments as well as the structure of German political parties (cf. Katzenstein, 1987: 39) reinforce consensus building, centrist political solutions,

and incremental change much more strongly than in the U.S., where one or the other party has full executive power. The important exception to the typical German coalition government was the so-called 'grand coalition' of CDU/CSU and SPD from 1966-1969 – a period in which, not coincidentally, the German apprenticeship governance regime was modernized into its current form.

The role of the state in Germany is larger than and different from its American counterpart (cf. CPB, 1997: chapter 5). The role of the American state is limited; economic adjustment is primarily left to private actors and market processes, and there is considerable skepticism towards government intervention in the economy. The American Constitution strongly protects individual rights and strictly separates legislative, executive and judiciary bodies. The primary role for the American state is to safeguard economic competition and to protect universal individual rights through strict application of control measures. This makes relationships between the state and companies somewhat adversarial (cf. Van Waarden, 1997). It also causes interest associations (such as employers' associations and unions) to act primarily as lobbying organizations in their relationships with the state. This then feeds a perception of such associations as rent seekers, and reinforces (the call for) strict enforcement of regulation by the state.

In Germany (and the Netherlands), cooperation and negotiation between the state and private agents within an elaborate institutional environment, as well as collective adaptability, are more strongly developed than in the U.S. (cf. CPB, 1997: chapter 5). Interest associations in general, and employers' associations and unions in particular, play prominent roles in this respect – the latter are often jointly referred to as 'social partners', a practice completely alien to the U.S.. Central and sectoral employers' associations and unions traditionally fulfill important roles: not only do they negotiate wages, but they also fulfill other socio-economic roles, such as in the implementation and supervision of social security, and –as we will see- in the organization of VET. In these latter instances, these roles are defined by legislation in which the state delegates certain functions to the 'social partners'. The roles of interest associations and the state are, however, more clearly defined and separated in Germany than they are in the Netherlands (as we will see in chapter 5). The German Constitution, for instance, prohibits active participation in public policy formation.

### 3.2.2 German industrial relations

Wage formation, on the other hand, is an autonomous affair of employers' associations and unions, who bargain over wages without any intervention by the government: they have bargaining autonomy ('Tarifautonomie'), and are not constrained by (minimum) wage regulations imposed by the government.

The organization of business interests in Germany consists of three tiers (Streeck

et al., 1987: 7-9). First, there are employers' associations that represent business interests in the field of social policy, and engage in collective bargaining with unions. Second, there are trade associations that focus on the economic, technical and commercial interests of their members. Both of these are normally organized nationwide on a sectoral basis, whereby the system of employers' associations is less fragmented than that of trade associations. Some associations act as trade and employers' associations at the same time. Third, there are various Chamber systems. Chambers are regional business associations that organize all firms in their region in a broad economic sector. These Chambers are a remarkable mixture of a semi-government organization representing public interests and a private interest organization representing business interests (Jäkel & Junge, 1986; Streeck et al., 1987; Streeck, 1992). They see themselves as fulfilling the functions of interest representation as well as self-government for their member firms (Streeck et al., 1987). In addition, the state has transferred a number of public responsibilities to them. One of the areas in which this is the case is vocational training (cf. section 3.5.1). Membership of these Chambers is compulsory. Industry and commerce form the largest Chamber sector.

The craft sector ('Handwerk') is another one, with a special status (Streeck, 1992: 108-1134). Most of what is called 'small business' in other countries in Germany falls within the legal category of 'Handwerk'. Its legal basis is the Statute of Artisans ('Handwerksordnung'). German law defines 'Handwerk' as a particular mode of production in which only specifically licensed establishments or self-employed individuals are allowed to engage. The Statute of Artisans and a number of court rulings specify criteria that distinguish 'Handwerk' from other sectors, in particular from industry. The Statute lists 125 trades in which artisanal production may occur ('handwerksfähige Gewerben'). Not all production in these trades is necessarily artisanal; it is only considered so if the firm is operated 'in an artisanal fashion'. The operationalization of this requirement is not defined in the Statute, but is delegated to the courts. There is no single criterion that decides on the issue - not even size. As for the licensing of establishments and individuals, the 'Handwerk' license equals a Master certificate (Streeck, 1992: 111-112). The latter is acquired through first serving and completing an apprenticeship in the trade, subsequently working for a couple of years as a journeyman to gain work experience, and finally passing the final examination of a Master course at special Master schools (cf. section 3.3.6). Either (one of) the owner(s) or the production manager has to be a certified Master for a firm to obtain a license.

On both the employers' and the workers' side, there are several peak associations (cf. Streeck et al., 1987; Visser, 1995; Van Waarden, 1995a). Since each tier of representation of business interests has its own peak association(s), their number is largest among employers; these have, however, created a special body for the coordination of the representation of business interests in training across all three

tiers: the Joint Committee of German Business for Vocational Training ('Kuratorium der Deutschen Wirtschaft für Berufsausbildung' or KDW). On the union side, in practice the German Trade Union Federation (`Deutscher Gewerkschaftsbund' or DGB) has been dominant, because it organized 81% of all union members in 1990 in only seventeen sector-based unions (Visser, 1995). German unions are, in the typology presented in chapter 2, typical examples of the industrial union model.

Whereas in the U.S. collective bargaining at the firm level is predominant, in Germany (and the Netherlands) this is the case for sector level bargaining. As an exception to this general rule, however, there are about 4,000 firms in the entire German federation (including former East Germany) that negotiate independently with unions (Schnabel, 1995). Volkswagen AG is a prime example of a firm-level agreement, but generally firm-level agreements in Germany concern small firms that closely follow sectoral agreements (CPB, 1997: 316). Sectoral collective agreements are usually not concluded at the federal level (an exception being the construction sector) but at the level of one state or even a part of one state (such as in metalworking). Regional negotiations within one sector are closely coordinated within the national unions and the employers' associations for the sector, so that regional variations are small (Schnabel, 1995). Separate but identical agreements are concluded if more than one union represents the workers of that particular industry. Different agreements with different durations are concluded for different aspects of collective bargaining. Negotiations on wage increases mostly take place on a yearly basis, while general labor conditions (including the wage *structure*) are usually fixed for several years (CPB, 1997: 306). Bargaining agreements specify minimum conditions regarding wages.

Collective bargaining agreements can be extended through two types of extension mechanisms. Firm-level extension makes a collective bargaining agreement binding for non-unionized workers within a firm. While this mechanism is not legally institutionalized in Germany, in practice it nearly always holds, through a voluntary clause in the collective agreement or the individual labor contract (Jacobs, 1993). Collective extension makes an agreement legally binding for the entire industry (for the entire country or its relevant region), including employers who are not affiliated with the employer's organization. German labor law specifies that the national or state Secretary of Labor can declare a collective bargaining agreement to be 'generally binding' if firms employing at least half of the workers in the sector have signed it, and if the extension 'serves the general interest' (Freeman; 1994b: 20; Freeman & Katz, 1994: 51; CPB, 1997: 310). Usually, however, the state does declare collective bargaining agreements generally binding for all firms in the sector and region covered (Van Waarden, 1995b), which extends their application beyond mere members of the unions and the employers' associations signing the agreement.

In 1990 trade union density was twice as high in Germany (33%) as in the

U.S. (16%) CPB, 1997: 307). This unionization rate has held steady in Germany, while it has dropped significantly in countries such as the U.S. and the Netherlands (Freeman & Katz, 1994: 53, CPB, 1997: 307). Strikes, however, occur much less frequently in Germany (and the Netherlands) than in the U.S. (cf. CPB, 1997: 311). Employers' organization density is, at 90%, much higher than union density (CPB, 1997: 307). American figures are lacking, and less relevant due to the fact that American collective bargaining is predominantly firm-based. 90% of all German employees in 1990 were covered by a collective bargaining agreement, whereas only 18% were in the U.S. (CPB, 1997: 307). Only 3% of all German employees were covered due to the collective extension discussed above. 95% of workers in the metalworking sector and all construction workers were bound by sector level collective bargaining agreements (Van Waarden, 1995a).

While rankings of national industrial relations systems in terms of centralization of wage setting vary[1], it is safe to say that the German system is rather centralized, particularly when compared to the U.S.. As in the Netherlands, national confederations of trade unions and employer organizations perform supportive and coordinating roles in the sector level bargaining process, but do not participate directly. Contrary to the Netherlands, however, peak level organizations of employers' and workers' organizations lack a formal system of joint discussions at the national level (Soskice, 1990) and do not interact on a regular basis. Overt coordination between sectoral bargaining units in their peak level organizations is weaker than in the Netherlands, while covert coordination is relatively strong, with collective bargaining in key sectors (in particular metalworking) setting the stage for other sectors (CPB, 1997: 314; Katz, 1993).

German industrial relations are, however, not only strongly institutionalized at national, regional and sector levels, but also at the local level. German works councils enjoy a wide variety of information, consultation and co-determination rights; but they cannot call strikes. One important example is co-determination rights on individual staff movement, which includes hiring, evaluation, redeployment and dismissal (Rogers & Streeck, 1994: 101). German works councils are elected by the entire work force in workplaces with five or more employees, every four years on a nationwide election day, with a turnout averaging 90% (Rogers & Streeck, 1994; 104, 113). The fact that roughly 80% of all seats nationwide tends to be won by affiliates of the largest German union confederation (DGB) is an important source of its strength, legitimacy and pride (Rogers & Streeck, 1994: 105). German works councils in practice function as an extension to unions (Visser, 1995). The German Works Constitution Act forbids councils to bargain over basic wages and holds them legally responsible to uphold and supervise the implementation of any collective agreement applicable to their firm (Rogers & Streeck: 105), thus stimulating congruency over competition between national and sector-level collective bargaining and workplace democracy in a major area. Works councils have safeguarded the

presence of unions in the workplace, and enabled them to represent their matters on 'qualitative', non-wage matters (Rogers & Streeck, 1994: 117, 149). In addition to works councils, there are two other mechanisms of collective representation in large German establishments. Plants with a strong union presence have a caucus of union delegates, elected by union and members; and German company law entitles work forces in large corporations to elect one half of the members of the supervisory board (Rogers & Streeck, 1994: 114).

### 3.2.3 Labor market governance in Germany

Moving from the roles of various actors (state, employers' associations and unions) in socio-economic governance in general and industrial relations and labor market governance in particular to the nature of the regime itself, it is again helpful to contrast stylized models of the American and German labor market (cf. CPB, 1997: 268-271). In the *competitive* model, of which the U.S. is a key example, (labor) market failure is reduced by supporting competition through the reduction of entry and exit barriers. This model relies on external labor market flexibility, tailor-made solutions at a decentralized level, diversity of labor conditions, and financial incentives to promote the allocative efficiency of the labor market. The specific institutional model into which this notion of labor market policy translates consists of easy hiring and firing of workers, school-based education, modest levels of job and income security, firm-level wage formation, and ample room for managerial autonomy. Germany, in contrast, is a key example of the *cooperative* model. This model relies on the commitment of employers and workers to keep implicit agreements in labor relationships, internalization of external effects into the bargaining objectives of interest groups, the creation of economies of scale through centralized agreements between relatively homogenous interest groups of labor and capital, and solidarity between workers as well as between insiders and outsiders. This translates into an institutionalization of the labor market distinguished by a high level of employment protection, dual education, income protection through more than modest social security benefits, centralized collective bargaining, and co-determination by worker representatives at the firm levels as a limit to managerial prerogative.

Employment protection is strict in Germany in comparison with the U.S., where periods of notice or severance payments are not obligatory. For individual dismissals, German employers have to consult the works council. If it disagrees, the worker has the right to remain employed until he has appealed at the labor court. On the other hand, if the works council agrees, the worker can still appeal at the labor court. Employment protection is limited for workers in small firms, however, as these generally do not have a works council, and do not have the possibility to appeal in court. Compensation varies from 1 to 18 months of pay, depending on the type of job, tenure and age. In the case of collective redundancies, the

state employment office has to be informed in addition to the works council; and the involvement of the latter becomes more extensive, as it will influence which persons will be dismissed and negotiate a social plan with the employer, including severance pay (15-25 weeks) and retraining measures (cf. CPB, 1997: 285-288). Even when Germany weakened its employment protection laws over the eighties, this resulted in very little change in German employment practice. The strength of German unions and works councils and the importance of apprenticeship meant that firms continued to hire people under permanent contracts, whereas similar legal changes in Spain at that time led to a situation in which most new workers were hired under temporary employment contracts (Freeman, 1994c: 237).

From the late seventies to the early nineties, the job turnover percentage in Germany hovered in the low teens, which is lower than in the U.S. (around twenty, but with a declining trend towards fifteen in the late eighties) and higher than in the Netherlands (around ten, but with a rising trend around fifteen by the early nineties; OECD, 1996b: 165). Charts relating job turnover and employment protection show the U.S. as a clearly contrasting case among our three countries, combining extremely low employment protection with high job turnover. The relative German-Dutch difference is nevertheless of interest, as Germany has managed to combine slightly higher employment protection with slightly higher job turnover (OECD, 1996b: 174).

Of more interest is the labor turnover, which measures the movements of individuals into and out of jobs rather than the net change in employment in firms between two points in time. Though there are comparability issues with the data, labor turnover is by far the highest in the U.S. (126.4) and the lowest in the Netherlands (22.0), with Germany occupying an intermediate position (62.0; OECD, 1996b: 166). A large part of mobility differences is actually concentrated among youths and young adults. 25-year-old German men had held on average 2.6 jobs in the previous 10 years in 1984 (women 2.0) as compared to 7.7 jobs (women 6.8) for 25-year-old American men in 1988 (OECD, 1996b: 126).

Vice versa, average tenure with a German firm is long: 9.7 years in Germany as compared to 8.7 in the Netherlands and 7.4 in the U.S. (1995-1996 figures from OECD, 1997, cited in Crouch et al. 1997: 37). And the percentage of German workers who have been with the firm for less than one year is low: 16.1%. The Dutch percentage is almost identical with 16.3%, while the American figure is 10 percentage points higher at 26.0% (1995-1996 figures from OECD, 1997, cited in Crouch et al. 1997: 37)[2].

The wage distribution in Germany is relatively equal. Freeman (1994b: 13, 27) has calculated that the bottom decile of American workers earned just 45% of what their German counterparts earned in 1992[3]. As in most developed countries, wage inequality (overall inequality and differentials by education) had dropped significantly over the 1970s; but over the 1980s, when it grew in many countries, there was

no noticeable change in Germany (Freeman & Katz, 1994: 38-40). The U.S., on the contrary, experienced a pronounced increase in earnings inequality over the seventies and eighties (Lerman & Lane, 1994; Abraham & Houseman, 1994). Wage differentials across German educational groups have remained relatively constant (Abraham & Houseman, 1994). The main contributor to overall higher inequality in the U.S. is the much higher inequality within groups themselves (Lerman & Lane, 1994). The wage differential in Germany between college graduates and apprentices is much smaller than the American college wage premium, but within these groups, variation is larger in the U.S., suggesting lower chances of German apprentices to penetrate the highest wage scales (Winkelmann, 1997: 167).

The role of collective bargaining and the extension of bargaining agreements are one obvious explanation offered for the low wage inequality. Another one is the fact that German firms treat college-educated and non-college-educated workers as much closer substitutes in production than American firms, which reduces the effect of technological change on relative skill demand and lowers pressure for wage structure changes (Freeman & Katz, 1994: 56). While German unions have generally followed a high-wage strategy and have been willing to back it up with strikes, there have also been some attempts at wage moderation of the Dutch variety – such as in 1993, when the unions offered a 'social pact' to control the growth of real wages (Freeman & Katz, 1994: 52).

## 3.3 The German education system

### 3.3.1 Main characteristics

The structure of the German education system is influenced by the federal structure of the German state. Most state authority for educational affairs resides with the individual states. Federal authority is mostly limited to the regulation of apprenticeship and training in firms, stimulating scientific research, framework legislation for higher education, as well as for educational staff. Responsibility for the school system resides with the individual states. This decentralized division of state responsibility results in some differences in the educational structures in the individual states.

To guarantee a mutual recognition of diplomas and the accessibility of state educational systems to pupils from other German states, the individual states have concluded the so-called 'Hamburger Abkommen' in 1964, in which they agreed on a common basic structure of the education system. Additional common agreements have been made in the 'Ständige Konferenz der Kultusminister der Länder in der Bundesrepublik Deutschland' (KMK - Standing Conference of the Ministers of Education and Cultural Affairs of the States in the Federal Republic of Germany). Individual state governments cooperate in the KMK. While the federal government

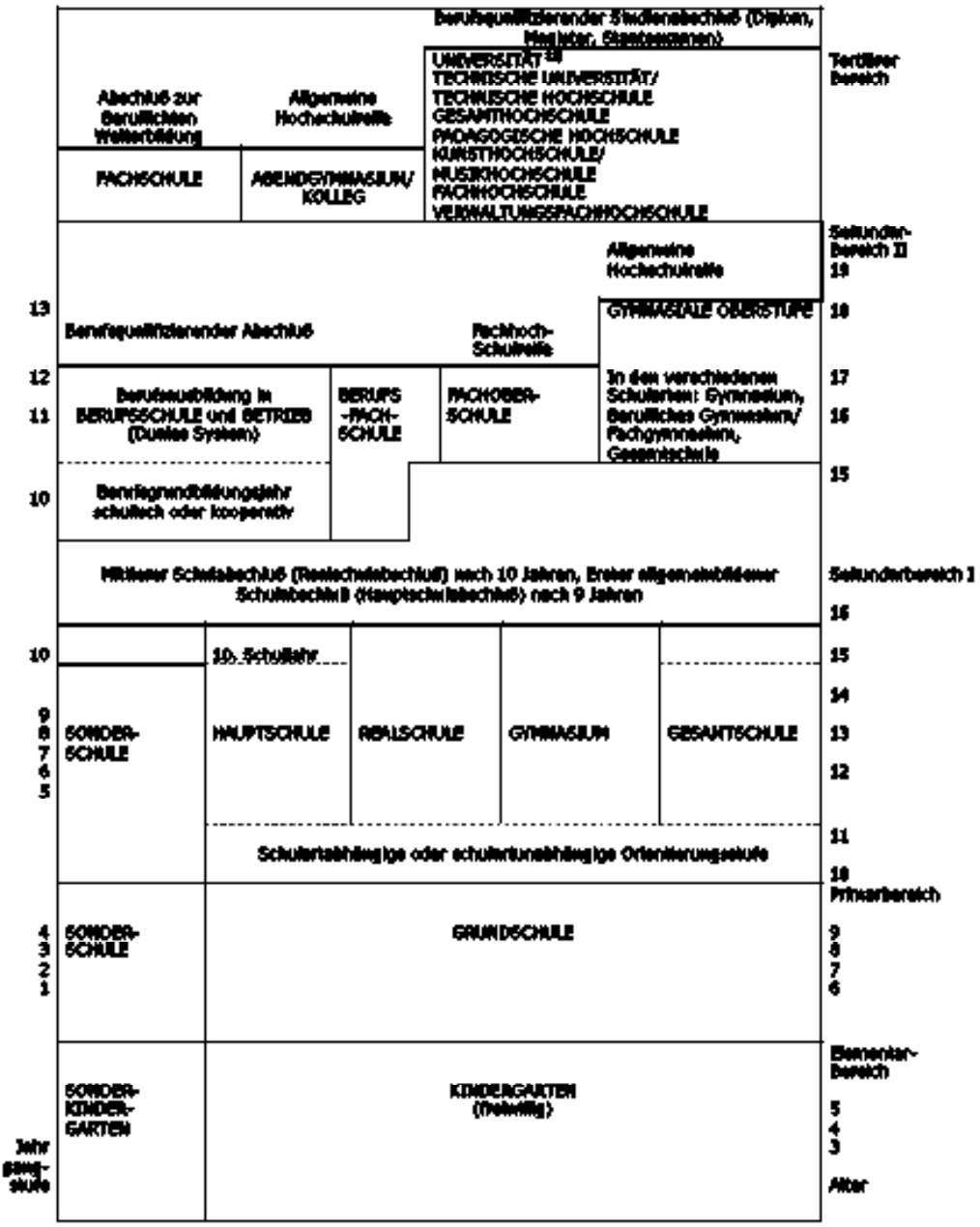
is not involved, KMK cooperation extends to areas where the federal government draws up framework legislation, to be elaborated upon by the individual states (KMK, 1994). Federal government cooperates with state governments in the 'Bund-Länder Kommission für Bildungsplanung und Forschungsförderung' (BLK), where they discuss educational planning and research stimulation.

Figure 1 shows the basic structure of the German education system. Both figure and text depict the situation in June 1994.

Primary education is unsegmented. Subsequently, pupils can opt for different school types (tracks) in lower secondary education. Higher secondary education consists of both general education that prepares its pupils for higher (tertiary) education, as well as VET. While apprenticeship accounts for the large majority of German VET, there is also a variety of school-based VET types. Tertiary education consists of both universities and higher vocational education colleges.

Compulsory education starts at the end of the sixth year for each child. It typically lasts 12 years, the first nine of which (in four states: ten) demand full-time school attendance, whereas the latter three demand part-time school attention. Many young people are trained as apprentices in those latter years, with its relevant school-based component (supplied by the local 'Berufsschule' that provides related instruction for apprenticeship training) as their fulfillment of the part-time requirement (typically two days a week). The exact form of the part-time school attendance requirement is usually geared to the length of their apprenticeship training. In the state of Baden-Württemberg, for example, the part-time requirement ends in principle, at the end of the school-year in which one completes one's 18$^{th}$ year; but youths who start their apprenticeship training are required to attend the Berufsschule (BS) until the completion of their training[4] (Hochstetter & Muser, 1992). Young people who are neither an apprentice nor enrolled in school full-time are required to attend BS to fulfill the requirement of partial attendance. In some states, they can fulfill their part-time requirement by completing an extra year of full-time school attendance (KMK, 1994).

Figure 3.1: The German Education System




*Source: KMK (1994)*

### 3.3.2 General secondary education

Lower secondary education offers three basic tracks: 'Hauptschule', 'Realschule' and 'Gymnasium'[5]. All three offer general education; (preparatory) VET does not exist at the lower secondary level. The first two years of these tracks are an orientation phase (KMK, 1994).

Hauptschule typically lasts five years, upon a successful completion of which a diploma is awarded ('Hauptschulabschluss') that gives access to various types of full-time school-based vocational education ('Berufsfachschulen' - BFS) and the vocational basic training year ('Berufsgrundbildungsjahr' - BGJ), which will be discussed in the next section. This diploma is also an entry requirement for access to some 'Fachschulen' (FS), that provide school-based continuing VET for trained apprentices with additional relevant work experience (KMK; 1994).

Realschule typically lasts six years, and successful completion is awarded with the intermediate diploma ('mittlerer Abschluss' or 'Realschulabschluss'). This gives access to additional further school-based education tracks than the Hauptschulabschluss, such as BFS that offer full-fledged (rather than introductory) VET, and schools that will give access to tertiary education (see the next section).

The Gymnasium offers the main route to tertiary education. It lasts nine years, and consists of two phases. The first phase is completed after six years, and (for those who pass all subjects) gives access to the second phase ('Gymnasiale Oberstufe'), which lasts three years. This is completed by means of a final exam ('Abiturprüfung'), which awards a diploma ('Abitur') which gives access to all types of tertiary education. There is a different form of this second phase, which is called 'Berufliches Gymnasium' in some states and 'Fachgymnasium' in others. Contrary to a regular Gymnasium, there is no first phase preceding this type; access is granted to those who have achieved the intermediate diploma with good results, or other diplomas equivalent to that (KMK, 1994)[6].

Young people have opportunities to acquire diplomas from another track than the one they originally enrolled in. At the end of the fifth year of Realschule, students can achieve the Hauptschulabschluss. In most states, Hauptschule students can enroll in a voluntary additional sixth year, to be completed with an extended Hauptschule diploma or (under certain conditions) even the intermediate diploma. In addition, various types of upper secondary education offer second chances to achieve these diplomas. The Abitur, however, can only be achieved at Gymnasiums. Those who achieve an intermediate diploma or an equivalent diploma from higher secondary education, and meet certain performance criteria, gain access to the second phase of the Gymnasium (and acquire the Abitur there). Various additional opportunities to achieve these diplomas exist in upper secondary education (section 3.3.4).

The division of young people over the different tracks has changed significantly over the last decades. The percentage of secondary school-leavers with (at best)

the Hauptschule diploma decreased from 75% in 1960 to 38% in 1991, while the percentage with the intermediate diploma grew from 16% to 35%, and that with the Abitur from 9% to 27% (Tessaring, 1991: 138). If we account for the fact that some lower secondary school-leavers achieve higher diplomas at a later stage (such as in upper secondary education), the declining relevancy of the Hauptschule diploma is even more remarkable, with only 31% ultimately ending up with no more than this diploma in 1991. The percentage of people who ultimately achieve an Abitur is of course higher, at 34% in 1991 (Tessaring, 1991).

### 3.3.3 Apprenticeship: a first introduction

Most general secondary school-leavers (primarily, but not exclusively, those from Hauptschule and Realschule) opt for subsequent apprenticeship training. The German apprenticeship system is definitely a *youth* apprenticeship system. In 1992, the average age of apprentices was 19.0 (BMBW, 1994). Almost all apprentices start training between the ages of 16 and 19, directly after finishing general secondary education. The number of apprenticeship training contracts typically corresponds to two thirds of the German population in the relevant age group (BMBW, 1993a; Tessaring, 1993: 136).

The German apprenticeship system is also known as the 'dual training system'. Remarkably, at least three 'dualities' concerning apprenticeship can be distinguished here (Arnold & Münch, 1994). The first one is the duality of school and firm. In the apprenticeship system, apprentices receive related instruction for a minimum of twelve hours a week in a school for related instruction ('Berufsschule' - BS), while receiving work-based training at their training firm for the remainder of the week[7]. A second duality is that between theoretical and practical education and training. This duality correlates to some extent with that of school and firm, but should not be equated with it. Not only do schools supply theoretical education, they also provide practical training. At the same time, firms not exclusively provide practical training but also have to introduce (or repeat) theoretical instruction. Finally, a third duality is embedded in the constitutional division of state responsibility for apprenticeship: it is shared between the federal and state governments. The federal government is responsible for the regulation of the work-based component of apprenticeship, whereas individual states are responsible for the regulation of its school-based component.

The last duality is the only pure one. Both in terms of the location of training provision and its contents, the term 'plurality' better captures reality than 'duality' (Münch, 1994). Apart from BS and firms, more organizations are often involved in the provision of apprenticeship training. The most important example are the so-called 'überbetriebliche Ausbildungsstätten' (ÜBS – regional apprenticeship training centers). These centres have been created since 1973, with the state financing up

to 90% of the founding costs, and the goal of 77,000 ÜBS training positions was reached in the mid-1980s (Koch & Reuling, 1994; Johannson & Schuler, 1994). Firms can contract out training components that they cannot perform themselves (e.g. because they lack a particular type of machinery) to these ÜBS[8]. Second, within each of the training organizations, several places for instruction and learning can be found. Not only do firms train apprentices on-the-job, they also do so in in-company training schools (with classrooms for practical as well as theoretical instruction) and/or instruction corners. Schools for related instruction (BS) have classrooms for both theoretical and practical instruction. Theory and practice are not clearly separable categories; they are, in fact, two poles within a multifaceted continuum.

Furthermore, the term 'dual' should not be meant to imply a lack of cohesion in apprenticeship training. Apprenticeship training offers substantial vocational education and training in relevant occupational skills and knowledge through an ordered track. Training is organized in officially recognized training occupations ('anerkannte Ausbildungsberufe'). This concept promotes a cohesion to the tracks that encompasses theory and practice, and school- as well as work-based components. We will elaborate this point in section 3.5.2.

The legal basis for an apprenticeship is provided by the 1969 Vocational Training Act ('Berufsbildungsgesetz' or BBiG) and the 'Handwerksordnung'. Apprenticeship training is based on a private apprenticeship contract ('Berufsausbildungsvertrag') between an individual firm and an apprentice and/or his legal representative (BBiG paragraph 4; KMK, 1994). Apprenticeship contracts are thus a separately institutionalized type of labor contract. They are concluded for the duration of training (BBiG paragraph 5), which varies between two and three-and-a-half years, depending upon the training occupation. Apprentices receive an apprentice wage that is raised at least every year of training (BBiG paragraph 10). Firms also have to pay apprentices for hours spent in related instruction, examinations, and for any other training outside the training firm (BBiG paragraph 12). Apprenticeship contracts expire upon graduation (BBiG paragraph 5). Contracts that bind the apprentice to the firm for the period after apprenticeship graduation are explicitly forbidden; only during the last three months of the training period may the apprentice enter into an agreement with the training firm for the period after graduation. Outside the probationary period[9], contract termination is limited to (unusual) situations where there are compelling reasons (BBiG paragraph 15). Beyond that, only the apprentice may terminate the contract when he wants to start training in another occupation or stop training altogether (with an advance notice of four weeks). There is a possibility of claiming damages if the other party ends the contract prematurely outside the probationary period (BBiG paragraph 16).

The only formal entry requirement for apprenticeship is that young people have fulfilled their full-time compulsory education requirement (KMK, 1994). There are

no official academic requirements that limit entry into apprenticeship. However, a prerequisite for entrance is that one finds an apprenticeship position with a training firm. And most firms do set academic requirements of their own when recruiting new apprentices. They may deviate from them when a particular applicant that does not meet them nevertheless seems promising, or when they cannot fill all their vacancies if they stick to their original requirements. Academic requirements differ strongly between training occupations (and, within each occupation, between individual firms). For instance, in 1992 56.1% of bank clerks ('Bankkaufmann') apprentices had finished the Gymnasium, whereas only 1.8 percent of them had merely acquired a Hauptschule diploma. But in the same year only 3.5% of the bricklayer ('Maurer') apprentices had finished Gymnasium, whereas 51.9% of them had acquired the Hauptschule diploma[10].

Without an apprenticeship contract with a firm, participation in apprenticeship is not possible. The only exception is apprenticeship training for youths with learning, language or social problems. These may start training in separate, specialized organizations ('überbetriebliche Einrichtungen'). While the goal is to have them continue training with a firm after the first year, they may complete their training in these specialized institutions if transition to a regular firm proves impossible. The number of apprenticeship positions in these specialized organizations is only a fraction of total apprenticeship enrollments: 16,000 in 1993 (Heidelberger Institut Beruf und Arbeit, 1993). Others who fail to find a (suitable) apprenticeship position have the option to enroll in certain forms of school-based upper secondary VET that provide an equivalent to the first year of apprenticeship training (cf. section 3.3.4). Upon graduating from these school-based equivalents, however, they will again need to find a training firm to complete training for this occupation; there are no school-based equivalents for the later training years of apprenticeship training occupations. If they do find a training firm this time, they will receive full credit for the school-based year, and start in the second year of apprenticeship training with their firm.

Graduation from apprenticeship requires passing a final examination ('Abschlußprüfung') that consists of both a practical and a theoretical component. Passing these exam awards a vocational certificate ('Berufsabschluß') whose exact name depends upon the training occupation ('Facharbeiterbrief' for those in the industry and commerce sector). Acquisition of this certificate is the central goal of apprenticeship training. Apprentices who progress at a faster pace than the official training duration may participate in the final examination early (BbiG paragraph 14). Apprentices who fail the final exam have the right to continue as an apprentice with their training firm for up to a year and get two re-examination opportunities (Onstenk & Hövels, 1995).

Before taking a more detailed look at German apprenticeship and its governance in section 3.5, the remainder of this section will briefly review the other upper secondary and tertiary education options.

### 3.3.4 School-based upper secondary vocational education

In Germany, apprenticeship training is the straight path for he labor market (except for those who enter tertiary education). German upper secondary education is based on the philosophy that, as long as sufficient supportive measures are provided, each youth can be trained to be a skilled tradesman ('Facharbeiter') through apprenticeship training (Malkmus, 1994). Contrary to the Netherlands (cf. Chapter 5), however, Germany has very few school-based VET tracks that offer a *full* equivalent to apprenticeship training. It does have a wide variety of school-based VET, but those tracks fulfill different roles than that of apprenticeship.

Part of these roles is aimed at helping young people make a successful entry into the apprenticeship system. This is the case for the 'Berufsvorbereitungsjahr' (BVJ – preparatory vocational training year), 'Berufsgrundbildungsjahr' (BGJ – vocational basic training year), and some 'Berufsfachschulen' (BFS – various types of full-time school-based VET). These do not offer a fully equivalent alternative to apprenticeship, but provide a bridge towards it. BVJ offers school-based education for young people that (because of learning difficulties or social handicaps) are not yet capable of meeting performance standards as expected in apprenticeship. It usually lasts one year, sometimes two years, and prepares students for VET or work. Sometimes students can simultaneously achieve a Haupt- or Realschule diploma. BVJ does not amount to any credit towards apprenticeship training, however. BGJ offers a year of basic vocational training across the span of an occupational field (rather than a single occupation). If students subsequently move on to related apprenticeship training, students get full credit towards the first year of that training, so they can immediately start with the second year. We can find BGJ in two forms: full-time school-based (BGJ-s) and a dual or cooperative form (BGJ-k). Many firms, however, do not consider BGJ-s an adequate alternative for the first year of apprenticeship training, and do not hire its graduates (Malkmus, 1994). Roughly half of the 30,000 (1992) BGJ-s participants can be found in one state, Niedersachsen (BMBW, 1993: 40; 1994: 185). 80% of the 49,000 participants in BGJ-k are located in another state, Bavaria (BMBW, 1993: 40; 1994: 185). BGJ-k students have a training contract with a firm just like apprentices, but spend more time in related instruction at a Berufsschule than regular apprentices do[11]. The various types of BFS will be discussed at the end of this section.

The other part of school-based upper secondary VET is primarily aimed at achieving a higher general diploma than the one with (or even without) which young people have left lower secondary education. These higher general diplomas then give them access to additional upper secondary or tertiary education options beyond their previous diploma. This applies to 'Berufsaufbauschulen' (BAS – vocational progress schools), some BFS, and 'Fachoberschulen' (FOS – vocational upper schools). The last two types combine general education with vocational education, but (apart

from a minority of BFS) they are not perceived as a fully equivalent alternative for VET as provided by apprenticeship. Those who are primarily interested in acquiring a higher general diploma opt for these schools; those primarily interested in labor market entrance through VET opt for apprenticeship training.

Together with the 'berufliches Gymnasium' and other second chances at an Abitur (section 3.3.2), BAS and FOS comprise the so-called second education avenue ('zweite Bildungsweg') in German education. BAS offer general and vocational education for a minimum of 1,200 hours and 1 year, and their diploma is equivalent to the intermediate diploma that graduates from the Realschule acquire. It can be attended part-time next to the apprenticeship training, or full-time for those that have completed apprenticeship training or have multiple years of work experience (KMK, 1994). FOS offer two-year tracks that combine general education and theoretical and practical VET. Those who have finished apprenticeship training in the same occupational field can skip the first year. Upon completion, the so-called 'Fachhochschulreife' is awarded, which grants access to higher vocational education, although it does not do so to university (KMK, 1994).

BFS themselves constitute a wide variety of tracks. Their common ground is that they offer school-based upper secondary education in both general and vocational subjects. They differ in the length of the track (1-3 years), entry requirements (from Hauptschule diploma to Abitur) and diplomas rewarded (Malkmus, 1994). Five types of BFS can be distinguished (Malkmus, 1994; StBa, 1994).

The first three types have in common that they do not offer a complete vocational qualification comparable to the Facharbeiter qualification provided by apprenticeship training, but merely offer a *basic* vocational qualification in one of the official apprenticeship training occupations (section 3.5). They differ in their entry requirements and the opportunity to acquire a general secondary education diploma. The first type offers basic vocational education for youths with or without a Hauptschule diploma. Students can also acquire a certificate equivalent to the Realschule diploma. Tracks mostly last two, occasionally three years. The second type of BFS offers basic vocational education for youth with a Realschule diploma. Some of these schools offer the opportunity to acquire the Fachhochschulreife that gives access to higher vocational colleges. Tracks mostly last one to three years. The third type of BFS offers basic vocational education with both the entry requirement and the exit level below the level of the Realschule diploma. Students can also acquire a certificate equivalent to the Realschule diploma. Tracks nearly always last one year, occasionally two or three. In 1992 156,000 students participated in one of these three types of BFS, with two-thirds of them enrolled in the first year (StBa, 1994: 93-94)[12]. A large part of these students continues their education in the apprenticeship system. Legal arrangements (so-called Berufsgrundbildungsjahr-Anrechnungsverordnungen) usually entitle them to years of credit towards apprenticeship training, provided it is in the same occupational field (Münch, 1994).

A good example of this is the one-year BFS (1BFS) in Baden-Württemberg. These BFS offer a year of school-based vocational training equivalent to the first year of apprenticeship training (comparable to BGJ-s, which hardly exist in that state). Firms in Baden-Württemberg thus have the option to skip offering the first year of apprenticeship training themselves and recruit 1BFS graduates as apprentices to continue with the second year of training. Some firms offer preliminary contracts promising an apprenticeship position upon successful 1BFS graduation and/or a small scholarship or exam premiums during 1BFS.

The other two types of BFS have in common that they do provide training aimed at a full vocational qualification. The fourth type offers a complete training towards occupations for which there is no apprenticeship training. These are called school occupations; they are located in the socio-cultural sector, or concern training to be a state certified technical assistant in the medical-technical, natural science, technical and economic-administrative sectors. Tracks here last two or three years and require a Realschule diploma. Often, an additional program will award the Fachhochschulreife, and thus grant access to higher vocational colleges (KMK, 1994; Malkmus, 1994; Münch, 1994). In 1992, 98,000 students were enrolled in this type, while 33,000 graduated from them (StBa, 1994: 99). The fifth type offers complete training for official apprenticeship training occupations through school-based tracks that generally take three years (Malkmus, 1994; Münch, 1994). These are in fact the only full-time school based tracks that directly compete with apprenticeship tracks. Enrollment in these tracks is very low, however. In 1992 roughly 8,000 students were enrolled in this type of track, while 3,000 graduated from them with an official vocational diploma (StBa, 1994: 95; 99). In the same year, about 433.000 students achieved such a diploma through apprenticeship training (our own calculations based on BMBW, 1994[13]), so the direct competition for apprenticeship from this fifth type of BFS is indeed practically negligible.

In an indirect sense, apprenticeship gets competition from the fourth type of BFS, because they also offer full vocational training, although they do so in different occupations. The case is therefore one of (labor and training) market segmentation rather than competition; and again, enrollment in this type of BFS is very low when compared with the number of apprentices. Most BFS students are enrolled in one of the first three types. There, they continue their general secondary education but combine it with basic vocational training for which they will receive credit in subsequent related apprenticeship training. Most students from these BFS, however, do follow it up with apprenticeship training (Münch, 1994). The only available figure relates to both BFS and BA, but is pretty compelling: 52% of BFS and BAS graduates continued with apprenticeship training, while only 13% continued with a regular job (Parmentier et al., 1994). In sum, these first three types of BFS function as a preparatory track for apprenticeship training. Some of these students enroll in such a BFS because they have not found a suitable

apprenticeship position; others because they still want to acquire a higher general secondary diploma, which will give them access to other school-based tracks (FOS, higher vocational colleges, health care tracks[14]) and/or raise their chances of a more attractive apprenticeship position later on (as firms do screen apprentices on previous educational performance, cf. section 3.3.3).

### 3.3.5 Tertiary education

Germany had a so-called specialized system of higher education (cf. OECD, 1985). In such a system, higher vocational education is offered at a level below university education[15]. In Germany, university tracks lasted four years (Münch, 1994). Higher vocational education is offered by the 'Fachhochschulen' (FHS - higher vocational education colleges). The tracks they offer differ from university tracks in their strong focusing on vocational practice, and on the application of scientific knowledge in that practice (rather than on the development of scientific knowledge itself). FHS tracks last three to four years. Internship components may or may not be included, depending upon the state, and the type of track (Münch, 1994).

Three types of certificates regulate entry into tertiary education[16]. The general college certificate ('allgemeine Hochschulreife') gives access to all university and FHS tracks. The field-specific college certificate ('fachgebundene Hochschulreife') gives access to university and FHS tracks in a particular field. The vocational college certificate ('Fachhochschulreife') only gives access to FHS tracks. The first two certificates are typically achieved through a successful Abitur exam after (at least) 13 years of general education (cf. section 3.3.2). The 'Fachhochschulreife' is achieved at a FOS (section. 3.3.4), after at least 12 years of education.

Adults without the Abitur can gain general access to tertiary education through assessment procedures - either the 'Abiturprüfung fur Nichtschüler' or 'Begabtenprüfung' (Dybowski et al., 1994; KMK, 1994). Adults that have completed apprenticeship training can gain access to tertiary education at an evening Gymnasium ('Abendgymnasium für Berufstätigen' or 'Kolleg') (KMK, 1994). In addition to these options that are part of the second education avenue, there is a third education avenue ('dritte Bildungsweg') that consists of roughly twenty arrangements for people with a VET diploma to gain access to tertiary education (Dybowski et al., 1994). These vary from trial study periods, admission exams, and direct access upon completion of a Fachschule (section 3.3.6).

In addition to the regular options of FHS and university, there is an intriguing variety of special higher education tracks ('Sonderausbildungsgänge'). These are (typically) three year, work-based education tracks that require at least a 'Fachhochschulreife' (Kramer, 1994; Münch, 1994)[17]. The most famous example is the vocational academies ('Berufsakademien' – BA). These originated in the state of Baden-Württemberg in 1974, and their example has been copied in a number

of other states[18]. BA in the Baden-Württemberg model offer work based higher education programs that are jointly supplied by a firm and state vocational colleges ('staatliche Studienakademien'). Entry requirements are an entry certificate into higher education, as well as a training contract with a firm that participates in the state vocational college. Recognition of these tracks was not regulated at the federal level, but five individual states have recognized the final three-year diplomas ('Diplomgrad-BA') as equivalent to those of the FHS[19] (KMK, 1994). Besides these BA, there are three other types of special tracks (Kramer, 1994). The first type are internal firm training tracks, of which regular apprenticeship training is one component, but is combined with additional training and additional examination(s) with a local Chamber. Second, there are tracks that combine apprenticeship training with an education at a 'Verwaltungs-' or 'Wirtschaftsakademie'. The latter provide scientific training for future managers in the economy or in administration. Third, there are tracks whereby a work-based component (often, that of a regular apprenticeship training) is combined with related instruction at a FHS or university. An important difference between all these special work-based tracks and the regular apprenticeship tracks is, that the former all share formal entry requirements, whereas the latter don't.

### 3.3.6 'Fachschulen'

'Fachschulen' (FS - continuing school-based VET) are a special type of VET. They offer a combination of initial vocational education and further training. They are categorized as level five (below-university tertiary education) according to the International Standard Classification for Education (ISCED) (CERI, 1995). They cater for trained apprentices from the apprenticeship system. Entry requirements into FS are an apprenticeship diploma as well as the related instruction diploma from the BS, and additional work experience in the relevant occupational field (KMK, 1994). Tracks vary from one to three years, and can be followed full-time or part-time. In the German labor market, FS graduates occupy an intermediate position between trained apprentices and FHS graduates. Their function is either that of a highly specialized tradesman, or one that includes management tasks besides the skilled labor component.

One type of FS is 'Technikerschulen' (technician schools) whose diplomas come with state certified titles such as state certified technician. Another type is 'Meisterschulen' (master schools). In the German craft sector ('Handwerk'), the 'Meister' title is a requirement for founding (and operating) a new firm (cf. section 3.2.1)[20]. It simultaneously gives the right to train apprentices. More recently, 'Meister' tracks have also been developed for industry – but the title is not a requirement for founding a new firm. The 'Meister' examinations are organized by the relevant Chambers.

## 3.4 The school-to-work transition in Germany

### 3.4.1 Apprenticeship participation

The German apprenticeship system accounts for the majority of school-to-work transitions in Germany. Apprentices account for over two percent of the *entire* German population; and 45.7% of 16-19 year olds in 1991 was an apprentice (StBa, 1993b). Table 3.1 presents participation data in German apprenticeship since 1975.

Table 3.1. Apprenticeship demand and supply in West-Germany, 1974-1999

| | (1) New apprenticeship contracts | (2) Unfilled apprenticeship vacancies | (3) Unplaced apprenticeship applicants | (4) Shortage/ surplus of apprenticeship positions = (2) – (3) | (5) Supply / demand ratio | (6) New apprenticeship contracts as % of the relevant population |
|---|---|---|---|---|---|---|
| 1974 | 450.000 | 29.000 | 21.000 | + 8.000 | 101,7 | |
| 1975 | 462.000 | 18.000 | 24.000 | - 5.000 | 98,8 | 49,4 |
| 1976 | 495.800 | 18.100 | 27.700 | - 9.600 | 98,2 | 50,6 |
| 1977 | 558.400 | 25.500 | 27.000 | - 1.500 | 99,7 | 56,3 |
| 1978 | 601.700 | 22.300 | 23.800 | - 1.500 | 99,8 | 57,8 |
| 1979 | 640.300 | 36.900 | 19.700 | + 17.200 | 102,6 | 60,0 |
| 1980 | 650.000 | 44.600 | 17.300 | + 27.300 | 104,1 | 59,4 |
| 1981 | 605.636 | 37.348 | 22.140 | + 15.208 | 102,4 | 55,1 |
| 1982 | 630.990 | 19.995 | 34.180 | - 14.185 | 97,9 | 57,9 |
| 1983 | 676.734 | 19.641 | 47.408 | - 27.767 | 96,2 | 63,1 |
| 1984 | 705.652 | 21.134 | 58.426 | - 37.292 | 95,1 | 67,2 |
| 1985 | 697.089 | 22.021 | 58.905 | - 36.884 | 95,1 | 69,1 |
| 1986 | 684.710 | 31.170 | 46.270 | - 15.100 | 97,9 | 71,6 |
| 1987 | 645.746 | 44.541 | 33.880 | + 10.661 | 101,6 | 71,4 |
| 1988 | 604.002 | 61.962 | 24.791 | + 37.171 | 105,9 | 70,4 |
| 1989 | 583.736 | 84.913 | 18.278 | + 66.635 | 111,1 | 66,9 |
| 1990 | 545.562 | 113.873 | 13.969 | + 99.904 | 117,9 | 66,5 |
| 1991 | 539.466 | 128.534 | 11.205 | + 117.329 | 121,3 | |
| 1992 | 499.985 | 123.378 | 11.756 | + 111.622 | 121,8 | |
| 1993 | 471.169 | 83.655 | 14.841 | + 68.814 | 114,2 | |
| 1994 | 450.210 | 52.767 | 17.456 | + 35.311 | 107,6 | |
| 1995 | 450.128 | 43.231 | 19.396 | + 23.835 | 105,1 | |
| 1996 | 449.299 | 33.866 | 24.637 | + 9.229 | 101,9 | |
| 1997 | 461.828 | 25.217 | 32.190 | - 6.973 | 98,6 | |
| 1998 | 483.334 | 22.873 | 23.359 | - 486 | 99,9 | |
| 1999 | 497.216 | 22.748 | 19.592 | + 3.156 | 100,6 | |

*Sources: Casey (1986), p. 65; BMBW (1994), p. 16; (6); Tessaring (1993), p.136*

Apprenticeship is a market, which implies that there will be shortages of either apprentices or apprenticeship positions, rather than a perfect match. The number of unplaced apprentice candidates peaked in the early eighties due to demographic[21] and economic factors. The apprenticeship system did prove capable of a rapid

expansion, however, when faced with this demographic and economic challenge: the number of new apprenticeship contracts grew by over 50% between 1975 and 1984. On the other hand, the number of unplaced apprentices in table 4.1 does underestimate the nature of the problem. Particularly in the late seventies and early eighties, 30,000 to 35,000 wannabe apprentices were placed in BVJ, BGJ or 'Berufsvorbereitungsmaßhmen, while 40,000 to 50,000 returned to school full-time, when faced with the shortage of apprenticeship positions (Casey, 1986). These numbers should be added to the number of unplaced apprentices listed in table 4.1 to find the total number of wannabe apprentices unable to find an apprenticeship position in those years. In the late eighties, the problem rapidly changed altered from a shortage of apprenticeship positions to a shortage of apprentices. Again, demographic factors were to a large degree responsible, as the number of 16-19 year olds has rapidly decreased since 1981.

Most apprentices transfer directly from a full-time school: 85% in 1988. 5% were previously employed that year, and 1% was previously unemployed (our own calculations based on Tessaring, 1993).

The 'Industry and Commerce' sector accounts for almost half of all apprentices. 'Handwerk' is the second largest sector. It trains relatively many apprentices as compared to the level of regular employment in the sector. In 1980, for instance, 40% of apprentices was registered with an artisanal chamber, whereas only 17% of all dependent employees worked in the artisanal sector (Casey, 1986: 69).

### 3.4.2 Apprenticeship graduation

The German apprenticeship system shows a high graduation rate. There are some technicalities in interpreting available data, but the most reliable estimate is that 88% of those that start apprenticeship training graduate as apprentices – though not necessarily in the training occupation they first chose (Althoff, 1994b). About 6% leave apprenticeship prematurely, and another 6% fail the final exam for the third and final time.

Behind this general average hide various sectoral differences. The number of premature contract endings, for instance, is twice as high in 'Handwerk' than in Industry and Commerce. And more than half of all hairdresser apprentices end their training prematurely, as compared to less than 4% of banking apprentices (BMBW, 1994).

### 3.4.3 Labor market prospects

The combination of high level apprenticeship participation and a high graduation rate implies that only a limited number of German youths do not complete their vocational (or higher) education: in 1990, this applied to only 14% of German

youths between 20 and 24 (Davids, 1993). Half of this group has not sought an apprenticeship position, their primary motive being money.

Unemployment among those who have not completed VET was 14.0% in 1991, as compared to 4.3% among those who had completed either apprenticeship or BFS (Tessaring, 1993). Unemployment levels per qualification level have been remarkably stable over time. While apprenticeship thus decreases the chances of unemployment, it does not lead to large increases in income: about 150 DM a month in 1988 (Tessaring, 1993).

### 3.4.4 Discrepancies between apprenticeship and labor market

In an apprenticeship system, the school-to-work transition consists of two separate transitions. The first is from a full-time school into apprenticeship; the second is from apprenticeship to (preferably related) regular employment.

While discrepancies between school-based education and labor show themselves exclusively at the transition from school-based VET to the (regular) employment market, with an apprenticeship system, an important share of such discrepancies will actually show up at the transition from full-time school into apprenticeship. Discrepancies between young people's occupational preferences and the firms' labor demand will show up in the apprenticeship market (Steedman, 1993). While school-based VET systems may have an unlimited training capacity, training capacity in an apprenticeship system is dependent upon the yearly supply of training positions made available by firms. Young people thus have no guarantee that they will find an apprenticeship position (cf. section 3.4.1). Of course, the opposite is also true: no firm is guaranteed an apprentice, particularly in times when the birth-rate drops. In 1993, for instance, only 24% of training firms had sufficient qualified apprentice candidates, while 51% complained about a shortage of candidates, and 25% about mostly unqualified candidates (Parmentier et al., 1994).

As in any good market, however, there is room for supply and demand to mutually adapt. Apprenticeship training generally starts in September, and firms and apprentices start looking months before. Information exchange on the original demand and supply will result in a process of mutual adaptation. Some firms will find they have to lower their skill requirements, while some youngsters will have to opt for another occupation than their original preference. The mechanism of firms gradually lowering their skills requirements if needed explains why the percentage of apprentices with the lowest diploma (Hauptschule) is inversely correlated to the number of apprentice candidates: when demographic and economic problems translate into shortages of apprenticeship positions, it is the weakest group that suffers most (Tessaring, 1993).

At this first transition, the 'Handwerk' sector acts as a kind of sponge in relation to the relative supply of apprentices (Casey, 1992). 'Handwerk' firms have a hard

time finding apprentices when apprentice supply and demand are at a comparable level, and even more so when the supply of apprentices is low. Youths generally prefer an apprenticeship in Industry and Commerce. But when the supply of youths rises, it is primarily the 'Handwerk'' sector that provides extra apprentices positions. 'Handwerk' thus was important in meeting the demographic and economic challenges of the early eighties. In 1971, 33.1% of apprentices was employed in 'Handwerk'; this percentage grew to 41.1% in 1979, and then decreased again to 32.2% in 1991 (our own calculations, based on BMBW, 1993; 1994). Apprenticeship in 'Handwerk' grew by 66% from 1970 to 1980, while total employment in the sector grew by only 2% (Casey, 1986).

Shortages of apprenticeship positions also correspond to increases in school-based VET participation. This is called the waiting room role of school-based VET (Grünewald et al, 1994). The apprenticeship system itself has, however, absorbed far more of the extra supply of youths over the first half of the eighties than full-time schools (Casey, 1986). To be sure: state subsidies have played a role in this. The individual states sponsored apprenticeship training with extra subsidies of DM 730 million in 1985, mostly for disadvantaged groups and disadvantaged regions (Streeck et al, 1987). These subsidies were abolished when the shortage of apprenticeship positions decreased (Koch & Reuling, 1994). In addition, the 'Bundeskanzler' as well as representatives of the social partners have repeatedly called on firms to supply (extra) training positions.

While the large demographic and economic challenges of the early eighties have met with some success at the first transition, they were not without their consequences even for those who successfully found a position. Some will have had to settle for much less attractive apprenticeship positions than they would have found in a more relaxed market; and more apprentices than usual were not offered a regular labor contract upon graduation (Casey, 1986; 1992). Blossfeld (1990) has shown that the German apprenticeship system causes a distinct form of inequality between *generations* of youths, depending upon the labor market situation when they look for an apprenticeship position.

In general, the relatively low level of youth unemployment in Germany is seen as an important indicator for an adequate school-to-work transition. The largest effect of apprenticeship in this respect, however, seems to lie in participation itself: youth unemployment is particularly low in Germany among 15-19 year olds.

The number of apprentices that become unemployed immediately after completing their apprenticeship training is relatively low: it hovers between 12 and 17% (Parmentier et al., 1994). In 1992, a year in which the economy did not fare well, 58% of apprentices received and accepted a permanent labor contract from the training firm upon graduation, and another 8% received a temporary contract. 16% chose to leave the training firm themselves, while 12% had wanted, but did not receive, a contract offer from the training firm (Parmentier et al., 1994). Not

all contracts offered concern employment as a skilled worker, however, particularly in a year of a weak economy. 10% of metalworking graduates, 7% of electronics graduates, and 2% of service sector graduates received a contract for jobs requiring fewer skills (Schöngen et al., 1994).

Intriguing is the fact that many apprentices, who are trained in the artisan sector, transfer to other sectors at a later point in their career (Von Henninges, 1994). In 1992, 58% of employed skilled workers that had completed their apprenticeship had done so in 'Handwerk'. However, only 31% were still employed there. Only 24% of them had been trained in industry, whereas 35% was employed there. Von Henninges (1994) thus speaks of a 'sectoral redistribution' of skilled workers after graduation. The two biggest streams are, on the one hand, of 'Handwerk' apprentices to the service sector and other sectors (16.5% of all skilled workers); on the other hand, from 'Handwerk' apprentices to industrial firms (12.0%).

Still, international comparative data show that the dissimilarity of German employment of 15-24 years olds compared with those aged 25 and over is significantly lower (.19 in 1994) than in both the Netherlands (.48) and the U.S. (.55) (OECD, 1996b: 136). One could argue this is an advantage, as it signifies that the education system disperses new labor market entrants adequately across economic sectors, roughly equivalent to their employment shares. On the other hand, one could argue that a different employment structure for the young as we can find in the Netherlands and the U.S. might imply a better adaptation to changes in employment structures, with young people predominantly being channeled to growing, and preferably high-skill, employment sectors. While they may be channeled to growth markets, there are indications that Dutch and American youth employment is particularly concentrated in sectors that may have employment growth, but are not generally known as high-skill sectors: hotels and restaurants; wholesale and retail trade, repair: and personal services (OECD, 1996b: 135). Of the sectors analyzed, it is only in construction that this picture is reversed. There, young workers are relatively overrepresented in Germany as compared with the Netherlands, and even more so with the U.S. (a topic we will revisit in section 4.4.2). In addition, while structural shifts in employment by industry cannot account for changes in young adult employment (OECD, 1996b: 142), the change in young adults' share in employment due to change in the industry mix of employment is significantly higher in Germany (3.6) than in the Netherlands or the U.S. (both 0.2: OECD, 1996b: 143, table 4.17), indicating a higher responsiveness to sector employment shifts for the German youth labor market. Data seem to indicate a large share of American and Dutch in (relatively) low-skill sectors being institutionalized as youth jobs, rather than career jobs for adult workers, due to their lower average wages.

In sum, the German apprenticeship system does not imply a flawless school-to-work transition, as a naive view would have it. Its biggest advantage is that it

successfully prevents a high level of youth unemployment among 15-19 year olds. Furthermore, a dominant apprenticeship system causes labor market discrepancies to take on a different appearance than they do in sequential transition models. Cases in point are the fact that many labor market discrepancies will show in the market for apprenticeship positions rather than in the regular labor market (for graduated apprentices); and that inequalities within a generation of young people are, to some extent, exchanged for inequalities between generations (cf. Blossfeld, 1990).

## 3.5 The German apprenticeship governance regime

The large market share of apprenticeship in the school-to-work transition in Germany in combination with low youth unemployment levels has aroused wide international interest in the German apprenticeship system. Why do German firms offer more apprenticeship positions than firms in other countries do? And why do the German youngsters opt for apprenticeship training in such large numbers? The answer to these questions is commonly sought in the incentive structures for firms and the young provided by the specific institutionalization of apprenticeship in Germany (Casey, 1986; 1992; Steedman, 1993; Soskice, 1994; Wagner, 1995; Van Lieshout, 1996a). The next section will therefore first examine the apprenticeship governance regime closely.

### 3.5.1 Overview: four types of actors, four levels

The regime governing apprenticeship is the joint product of decisions by various actors at different levels. To begin with, the federal state is responsible for the work-based component of apprenticeship training, while the individual states are responsible for the school-based component (cf. section 3.3.3). This obviously requires cooperation between them. In addition, there are a large number of arenas to provide access to societal groups (in particular, employers' associations and unions) to influence vocational education and training. These arenas derive their legitimacy from the state, but state representatives are just one of the parties that have a say in them. The result is a complicated governance regime in which four types of actor (federal state, individual states, employers' associations and unions) participate, and which expands on four levels. We will confine ourselves to an overview of the most important arenas on these at the four levels[22].

In the first place, on the federal level, the Federal Department for Education and Science ('Bundesministerium für Bildung und Wissenschaft' or BMBW) is formally responsible for the coordination and regulation of the work-based apprenticeship component. In practice, however, the 'Berufsbildungsförderungsgesetz' (Vocational Training Stimulation Act) delegates most of the tasks at this level to the Federal

Institute for Vocational Training ('Bundesinstitut für Berufsbildung' or BIBB). The BIBB advises the federal government and other parties, conducts research on developments in apprenticeship training, and coordinates the development of skills standards for the work-based component of apprenticeship training (Streeck et al., 1987; Hilbert et al., 1990; KMK, 1994). Federal government, state governments and peak organizations of employers' associations and unions cooperate as equal partners in the BIBB. The most important arena is the central board of BIBB ('Hauptausschuß'). Each individual state has a representative on this board; in addition, the federal state, employers' associations and unions each have one quarter of the votes in the committee. KDW and DGB nominate the employers' and workers' representatives, respectively. At this federal level, there are three types of decisions in which these peak organizations of the social partners are involved (Streeck et al., 1987). First, the central board provides recommendations regarding fundamental issues (such as funding). In this area, consensus is rare. Second, the central board produces recommendations on the standardization of training among different occupations, for example on the suitability of training sites, or the duration of training. Here, consensus often prevails. Last, KWD and DGB nominate the experts for both sides that are to draw up the skills standards document for specific occupational fields. In practice they tend to follow the proposals of their own member association(s) from the sector concerned.

In the second place, on the level of the individual states, responsibility for the school-based component of apprenticeship rests solely with the Department of Education of the individual state. These Departments, however, receive advice from state VET committees in which state government representatives cooperate with representatives of state level peak organizations of employers and unions (KMK, 1994).

In the third place, on a regional level, authorized bodies ('zuständige Stellen') play important governing roles in the dual training system. The BBiG has designated eleven Chamber systems which are authorized bodies by the BBiG. This delegation dates back to the time around 1900, when the state gave Chambers of Artisans the task of supervising and implementing the rules the state had issued for apprenticeship training. For the Chambers of Industry and Commerce, regulation of apprenticeship has been a task they embarked on voluntarily until the BBiG was established in 1969 and legally required them to do so (Jäkel & Junge, 1986). State agencies function as authorized bodies for the relatively few occupations that are not organized in Chambers, such as the civil service occupations. All authorized bodies are legally responsible for registering apprenticeship contracts, deciding on requests for a shortening of training duration, judging firms' ability to provide quality training, organizing the (intermediary and final) examinations, supervising the training progress of training in general, and advising both training firms and apprentices. Each new apprenticeship contract has to be registered with the

residing authorized body that has to see if it complies with all the regulations (BBiG paragraphs 31-33). Representatives from these bodies visit firms when these want to start training in a particular occupation to determine whether the firm is able to perform all necessary training. BBiG paragraphs 20-22 stipulate that a firm has to have a qualified trainer, and that the firm itself has to be qualified to offer full-fledged training in the occupation concerned. The former requirement is specified in a number of trainer capability ordinances ('Ausbildungseignungsverordnungen'). The latter requirement is flexible, to the extent that firms can still train as long as there are satisfactory arrangements to have the apprentices trained elsewhere for those elements for which the firm cannot provide training itself. Such arrangements then are included in the individual apprenticeship contracts of the firms' apprentices. Firm visits are repeated once in a while to determine whether the firm is still qualified to offer full-fledged training.

Chambers have also been the most important founders of the regional apprenticeship training centers (ÜBS). Apart from state subsidies, operating costs are covered either from Chamber budgets[23], fees of firms that use the facility, or a levy imposed on all firms in the region. And lastly, Chambers often voluntarily supply remedial teaching courses, further training courses in general, and training courses for in-company trainers in particular (Jäkel & Junge, 1986).

To limit the risk that the Chambers will go too 'soft' on the firms (after all, their members) they have to supervise in their training efforts, they are legally required to install a vocational training committee ('Berufsbildungsausschuß'). This committee consists of six representatives of employers' associations, six representatives of unions, and six non-voting representatives of vocational schools (BBiG paragraph 56). This committee decides on all training regulations that the authorized bodies issue, and has to be informed and heard on all matters regarding training (BBiG paragraph 58). The authority of these committees is, however, limited by the fact that they are bound by the financial means that the Chambers' general assembly ('Vollversammlung') - which is made up exclusively (Chambers of Industry and Commerce) or for two-thirds (Chambers of Artisans) of employer representatives – provides for these tasks (BBiG paragraph 58). Committees thus cannot autonomously decide to establish a regional apprenticeship training center, or substantially enlarge the number of training counselors. The training counselors employed by the Chamber, furthermore, report directly to the Chamber executive. In all, union influence in this area is therefore still less than that of employers (Streeck et al., 1987).

At the level of individual firms, the decision whether to engage in apprenticeship training at all, as well as the decisions on the training occupations in which to train and on the number of apprentices, are exclusively the province of management (Streeck et al., 1987). But German co-determination legislation[24] gives works councils various information, consultation and co-determination rights regarding vocational

training in general - including apprenticeship training. Works councils enjoy the right to information in good time on actual and future staff needs, consultation rights on employment trends and anticipatory vocational training measures, and co-determination rights on the implementation of vocational training measures (including participants in the case of further training for incumbent workers) (Schömann, 2002).

### 3.5.2 Skills standards

#### 3.5.2.1 Training occupations

The important role of occupations ('Berufe') in Germany was pointed out in section 2.3.6.3. One of the institutional configurations underlying/reflecting this importance is their role in the organization of apprenticeship training – and, consequently, the majority of German VET[25]. The supply of apprenticeship positions is exclusively limited to a number of training occupations that are officially approved by the state. BBiG paragraph 28 section 2 explicitly forbids the training of youth under age eighteen in other occupations[26]. The same section further designates that training for a recognized occupation must correspond to a training regulation ('Ausbildungsordnung'). This is a skills standards document issued by the federal state that lists the minimum level of competencies in various areas, for which the firm must train its apprentices in that occupation (cf. section 3.5.2.2).

(Training) Occupations are much more than just one aspect of apprenticeship governance; in fact, they can be seen as a cornerstone for the BBiG (Stooß, 1990). Occupations ('Berufe') create institutional relations that regulate interactions between VET and labor market (Reuling, 1998). Training occupations are not a representation of vocational activities as they exist in the labor market, but qualification bundles that train for an occupational competence at the level of a skilled worker, independent of the individual firm (Benner, 1992). Training occupations fulfill various important functions in Germany (Stooß, 1990; Koch & Reuling, 1994; Reuling, 1998). They limit the multitude of possible combinations of tracks, tasks and functions to a number of legally recognized arrangements for labor market access (Stooß, 1990). They serve as orientation points for the socialization of the young by offering them the chance to identify with these occupations (Koch & Reuling, 1994; Reuling, 1998). They offer a basis for the trade of labor for reward in the labor market. They reduce the number of occupational labels, and fulfill an informative and exploratory function for labor market actors (Koch & Reuling, 1994). Firms require a reliable and transparent supply of qualifications in the labor market; training occupations enhance reliability and transparency. Training occupations provide a bridge between the structuring of work in firms and VET. As such, they function as orientation points for curriculum development (Stooß, 1990).

The regulation of training occupations on a sectoral and national level has a long history in Germany, which dates back to the state regulation of artisanal occupations around 1900, and voluntary efforts towards self-regulation in the industry sector in the early decades of the 20th century (Hilbert et al., 1990). The number of recognized training occupations has gradually decreased over the second half of last century, from 901 in 1950 (Münch, 1994) to 606 in 1970 (BIBB, 1992) and 374 in 1994 (BMBW, 1994). Apprentices are highly concentrated in a more limited number of training occupations than the total number of training occupations suggests. In 1992, the thirty most popular training occupations accounted for 63% of all apprentices (BMBW, 1993). 40% of male and 54% of female apprentices is trained in the most popular ten occupations for their gender. Occupations in both top tens are surprisingly constant over the years (Malkmus, 1994).

The decreasing number of training occupations was the result of a conscious educational policy, aimed at the improvement of training occupations by making them broader[27]. Work contents have shifted from predominantly stable and predictable situations to increasingly open and complex situations. Besides sufficient occupational competencies, methodical and personal-social competencies have become more important. Methodical competencies refer to abstract-logical reasoning and the development of problem solution strategies. Personal and social competencies include motivation, decision making, and the willingness and ability to cooperate. All such competencies are referred to as key qualifications, 'Schlüsselqualifikationen', in Germany (Koch & Reuling, 1994). Mertens (1974: 40) introduced the concept as follows:

> "Key qualifications are those that relate to such knowledge, abilities and skills, that do not have a direct and limited relevance to specific, separate practical tasks, but much more achieve a) the capability for a large number of positions and functions as alternative possibilities at the same time, and b) the capability to master a sequence of (mostly unforeseeable) changes in requirements over the life course."

In this process, a new definition of training goals has originated over the eighties[28]: apprenticeship must train apprentices to be workers that are capable of planning, performing and controlling their skilled work independently (BIBB, 1992; Koch & Reuling, 1994). This way, one tries to simultaneously achieve a high level of craftsmanship as well as a maximum potential for mobility and flexibility for future workers. These improved goals have led to the aforementioned reduction of training occupations.

#### 3.5.2.2 Skills standards development

Since individual states are responsible for schools and the federal state for work-based training, *two* separate sets of skills standards apply to each training occupation: one for the school-based component, and one for the work-based component. This could result in two problems.

First, if individual states draft up vastly different skills standards for the school-based component of the same apprenticeship occupation, both diploma recognition between states and (consequently) inter-state worker mobility might suffer. To prevent this, the individual states together have developed a framework skills standards document for the school-based component in their cooperative body, KMK[29]. Individual states' education Departments then either adopt this framework, or develop their own specific versions of it. Generally, these Departments are themselves advised by advisory committees with representatives of the social partners and VET schools. Individual state skills standards are then translated into individual school plans and a specific curriculum by the individual BS.

Second, skills standards for school- and work-based components of the same occupations might overlap or conflict with one another. Obviously, coordination between the framework skills standards document for the school-based component and the 'Ausbildungsordnung' for the work-based component is desirable, since both apply to one and the same apprenticeship track. Federal and individual states have therefore agreed on a complex and detailed procedure in which the mutual development and adaptation of both sets is institutionalized in the Joint Resolution ('Gemeinsames Ergebnisprotokoll') of 1972 (Streeck et al., 1987; Benner, 1992; KMK, 1994)[30].

In it, four methods of coordination have been institutionalized:

- Talks between representatives of federal government and state governments;
- A coordination committee consisting of representatives of federal government and state governments;
- Expert committees from the federal government;
- Expert committees from the KMK.

For the work-based component firms, sectoral employers' associations and unions work together with experts from the BIBB to develop the 'Ausbildungsordnung'. Formal final approval is the privilege of the federal Minister responsible for the sector at hand – usually that of Economic Affairs (Streeck et al., 1987; Hilbert et al., 1990; BIBB, 1992; Benner, 1992). Until 1969, employers' associations developed skills standards by themselves. They financed an organization that developed draft skills standards. The 1969 BBiG installed equal rights for unions in the development of skills standards, and created the BIBB as a state financed organization to support the development of skills standards and innovative training methods (Hilbert et al.,

1990). BBiG paragraph 25, section 2 stipulates the minimum components of an 'Ausbildungsordnung':

- The profile of the training occupation;
- Training duration;
- Knowledge and skills that are the subject of training ('Ausbildungsberufsbild': training occupation profile);
- A manual for the substantial and temporal ordering of that knowledge and those skills over the training period ('Ausbildungsrahmenplan': training framework);
- Examination requirements for the final exam ('Prüfungsanforderungen').

'Ausbildungsordnungen' only contain *minimum* requirements for training firms. This has two (intended) consequences. First, it leaves individual training firms the freedom to include their own firm-specific accents in their own apprenticeship training above and beyond these minimum criteria[31]. Second, it leaves firms the freedom to incorporate new (technological or other) developments in their apprenticeship training. 'Ausbildungsordungen' therefore usually abstain from any reference to specific methods, procedures and technologies – since these particular ones may soon have become obsolete and will be replaced by superior ones. There are other ways to achieve a certain minimum standard for technology (e.g. a precision specification for a certain metalworking operation). This way, not every technological change will result in a skills standards revision (Adler, 1994).

Experts from sectoral employers' associations and unions support research of the BIBB on developments in labor market demand for qualifications and in training practices in their sector. There is a consensus principle regarding the revision of training occupation(s) or the development of new ones: only when employers' associations, unions and the federal and state governments agree on a number of basic principles can a formal procedure ('Neuordnung') to develop or revise skills standards for a sector be started (Streeck et al., 1987). There should at least be agreement on the number of occupations, name(s), duration of training, basic description of occupation(s), training structure and a procedure for the development of actual skills standards. As long as such agreement is lacking, nothing will change. Once the parties agree, it is again experts from the sectoral employers' association(s) and union(s) that cooperate with experts from the BIBB in the actual drafting of a new skills standards document.

'Ausbildungsordnungen' tend to remain in force for a long period. The most important ones in the construction sector date from 1974. And in the metalworking industry, there were still some dating from the forties up until the 1987 skills standards revision for that sector. Formally, the maximum period for a skills standards revision procedure is two years. While this may occasionally last longer, the most important reason for delays in skills standards revision lies in the necessity to reach consensus before any formal procedure can start. An extreme example is

provided by the aforementioned revision of skills standards for the metalworking industry. Whereas the social partners began discussing it in the early seventies, the new skills standards were not adopted before 1987. At first, social partners simply disagreed about basic principles. Subsequently and more importantly, however, this particular 'Neuordnung' gained prominent strategic importance for broader paradigmatic changes in apprenticeship governance (such as reeducation and broadening of training occupations; cf. section 3.3). Usually the entire process is shorter, but a number of years for broad occupational fields is not unusual.

Discussions and decision-making processes within the association systems of both employers and unions thus contribute significantly to the governance of the apprenticeship system (Streeck et al., 1987). First, the organization of both labor and business in sectoral associations allows them to translate the various jobs that exist in various firms into a limited number of training occupations for an entire sector. This ensures a certain broadness to apprenticeship training in each occupation and, subsequently, possibilities for future external worker mobility. One employers' association (Gesamtmetall) and one union (Industriegewerkschaft (IG) Metall), for instance, negotiated on training occupations for the entire metalworking industry. While this does not include the craft metalworking sector, it accounts for over half of German industrial employment (Streeck et al., 1987). In 1987, after a lengthy negotiating process, they finally replaced 37 old training occupations by 6 new ones with (in all) 17 specializations (Klein & Schlösser, 1994). Gesamtmetall had to coordinate the interests of many more specialized sectoral trade associations and their members; IG Metall had to coordinate its activities with other unions, as many metalworking occupations are found in firms outside the metalworking sector.

In sum, the sectoral employers' associations and unions have strong positions in apprenticeship governance due to their vital role in developing skills standards for the work-based training component. But it is the peak associations and not the sectoral organizations that participate in the formal meeting with the responsible federal Minister where a request for the start of a new skills standards development procedure is debated. And it is the peak associations that are asked for their formal opinion on the draft version of both skills standards documents for the occupation, and who can later use their influence in subsequent meetings on the topic in the central (and other) board(s) of the BIBB (Streeck et al, 1987; BIBB, 1992; Benner, 1992). So far, disparate developments between sectors are scarce (Streeck et al., 1987). This indicates an effective coordination across sectors, be it through voluntary restraint by sectoral organizations or through the informal use of influence through peak associations.

#### 3.5.2.3 Examination

Graduation from apprenticeship requires passing a final examination ('Abschlußprüfung') that consists of both a practical and a theoretical component. Passing these exams awards a vocational certificate ('Berufsabschluß') whose exact name depends upon the training occupation ('Facharbeiterbrief'; 'Fachangestelltenbrief', 'Gesellenbrief'). Acquisition of this certificate is the central goal of apprenticeship training. Before this, apprentices take part in at least one intermediate examination during their training. Its only aim is to ascertain whether the apprentice is on the right track. If not, the authorized body can undertake action to help him back on track (Münch, 1994).

There are, however, two other certificates that apprentices can (and, ideally, will) acquire simultaneously with the 'Berufsabschluß'. First, those who successfully complete their BS attendance gain a BS certificate that – if certain performance standards have been met - includes the Hauptschule or even Realschule diploma (KMK, 1994). But this BS certificate is *not* a requirement for the aforementioned final examination. Second, the apprentice will get a certificate from his training firm upon completion of this training. This certificate, too, is completely independent of the other two. Together, these three independent certificates constitute a 'triple certification system' (Reisse, 1996). We must reiterate, however: the 'Berufsabschluß' is the only proof of apprenticeship graduation. The other two certificates are bonuses.

Both the interim and final examination are organized and developed by the individual authorized bodies. These develop their own 'Prüfungsordnungen' to regulate their exams. They constitute examination committees with an equal number of employer and union representatives (usually one each), plus (at least) one BS teacher (Münch, 1994). This decentralized organization of exams implies that the national skills standards for the work-based component cannot completely guarantee the same qualification level nationwide for each occupation. The examination requirements for the final exam ('Prüfungsanforderungen'), which are contained in the 'Ausbildungsordnung', however, tie the authorized bodies to similar conditions. In addition, in a number of important sectors, all authorized bodies use the same exams. The 'Prüfungsaufgaben- und Lehrmittelentwicklungsstelle' of the Industry and Commerce Chamber in Stuttgart has developed examinations for over 100 technical industrial occupations that are used nationwide. And an institute in Nürnberg has developed examinations that are used nationwide for a number of economic-administrative occupations. The 'Handwerk' sector, however, sticks to a decentralized organization of exams. Even there, however, a committee at the level of an individual state may develop a specific exam, or a pool of exam questions from which individual Chambers can choose.

It is possible to take the final examination without previously completing

apprenticeship training, as a form of assessment. Participation in this 'Externenprüfung' generally requires work experience in the relevant occupation for a period of twice the training duration. If one can show to have acquired relevant knowledge and skills elsewhere, the required work experience may be shorter. And if one has completed school-based VET similar to the apprenticeship, no additional work experience is required. Various organizations offer courses that prepare for participation in the 'Externenprüfung' (Hecker, 1993). Participants are mostly employed, and over half has already completed apprenticeship training in another occupation (Hecker, 1994).

#### 3.5.2.4 External and internal differentiation

*External differentiation*

Three types of training occupations can be distinguished (Adler, 1994): mono-occupations (occupations without specializations), occupations with specializations and multi-tiered occupations ('Stufenausbildung'). Mono-occupations have one single training occupation profile and one single training framework for all apprentices in that occupation. Specialized occupations have specializations based on differentiations in training occupation profile and/or training framework. There are two types of specializations. Firstly, 'Fachrichtungen' within a training occupation, which differ in both training occupation profile and training framework. Secondly, 'Schwerpunkten' share the same training occupation profile, but have different training frameworks (Adler, 1994).

Multi-tiered occupations ('Stufenausbildung') are occupations from which formal graduation is possible after two (or more) different stages. Contrary to other occupations, such a stage itself may be shorter than two years. The last important sector that still has multi-tiered occupations is the construction sector. The training occupations consist of two stages, the first of which lasts two years, the second one year. The first year is a joint year for all construction apprentices, and contains 20 weeks' of training in a ÜBS. The second year they are trained in one of three broad areas (e.g. road or water construction), and still attend a ÜBS for 13 weeks. After this second year, apprentices may take a final exam and graduate in each of these areas/occupations (Johannson & Schuler, 1994). But the majority of apprentices completes an interim exam and proceeds to the second stage/third year, in which they can choose from (in all) eleven other occupations to graduate in. This year concludes with a four-week training period at a ÜBS just before the final examination (Johansson & Schuler, 1994).

The transparent and elaborate horizontal external differentiation in training occupations in German apprenticeship coincides with a very low level of vertical differentiation across different qualification levels, which dominates VET in many other

countries (Reuling, 1998). And the reduction of independent training occupations has further reduced the level of external differentiation in the apprenticeship system. Formally, all apprenticeship tracks are equivalent and train for one and the same qualification level (i.e. that of skilled worker). This even goes for both stages of a 'Stufenausbildung'. In practice, graduates from just the lower stage will obviously find themselves in different jobs and different labor market segments than graduates from the upper stage do[32]. Therefore, one can speak of external differentiation of occupations in the case of a 'Stufenausbildung'. In addition, external differentiation could be perceived to exist in situations where different but somewhat similar training occupations with a different training duration co-exist. A case in point is the continuation of the former two-year training occupation 'Teilezurichter' in the metalworking industry, next to the new, three-and-a-half year occupations. Such shorter occupations are unpopular with apprentices, and have low enrollments[33].

There are different ways through which the reduction of the number of training occupations and external differentiation has occurred. Firstly, where previously tracks at different qualification levels existed, these have often been integrated. Secondly, related training occupations have been merged. This often implied merging previously independent mono-occupations in a new specialized occupation, with a joint first year, and specialization opportunities in later years. The most famous example in this respect is the new industrial metalworking occupations that were set up in the eighties. 37 former training occupations were replaced by six new ones. Five of those are specialized occupations with 'Fachrichtungen', the sixth is a mono-occupation. Training duration is three and a half years for each occupation. All six occupations share a joint basic training component; training in the particular occupation starts afterwards (Streeck et al, 1987; BIBB, 1992; Klein & Schlösser, 1994).

Although most employers' associations agree on the necessity of broad apprenticeship training, most pressure in this direction has actually come from the unions. German industrial unions do not try to restrict access to training in order to keep up the price of skilled labor (as craft unions may do), but press for an apprenticeship system that guarantees high quality training for all (future) workers (Streeck et al., 1987). They try to strengthen their power through maximizing the homogeneity of the workforce they represent, which explains their interest in keeping the level of both horizontal and vertical external differentiation low (cf. Streeck et al, 1987; Reuling, 1998). The 'Stufenausbildung' therefore grew unpopular with unions, in particular because of negative experiences in with the old metalworking industry occupations in the seventies. Not all apprentices that wanted to, got access to the second stage of these occupations; and when employers proposed to create a lower wage group for stage one graduates, the metalworking union (IG Metall) turned against the 'Stufenausbildung'. This was the prime conflict

between employers and unions that long stalled the revision of skill standards for the metalworking industry. Unions in general adopted the policy that they would no longer accept training occupations of less than three years (Koch & Reuling, 1994).

*Internal differentiation*

The low level of vertical external differentiation in German apprenticeship, the participation of apprentices with very different (general) skills levels within the same tracks, and the resulting high graduation rate, provide a very intriguing picture. How do they do *that*? An important part of the answer lies in the high level of internal differentiation ('Binnendifferenzierung') of apprenticeship. There are three types of internal differentiation: temporal, curricular, and methodical-didactic (BMBW, 1994).

The first of these, temporal differentiation, finds its legal basis in BBiG paragraph 29. Apprentices can get a reduction of training time for one or several six-month periods. In some cases (when relevant school-based VET has been completed, cf. section 3.3.4) such a reduction is compulsory. (Additional) Reduction can be awarded for other relevant previous educational experience (i.e. an Abitur, or training in a related training occupation) or because of outstanding progress during the training period itself. The authorized body decides in such matters, advised by BS and training firm. In 1992, 19% of all apprenticeship contracts contained such a reduction (BMBW, 1994).

The second type, curricular differentiation stems from the fact that the 'Ausbildungsordnungen' contain *minimum* requirements (cf. section 3.5.2.2). As some firms will stick with these minimum requirements, whereas other (more innovative) firms will train beyond them, in practice (slightly) different programs will co-exist within each training occupation. And as firms with the more demanding programs tend to recruit the more talented apprentices, this form of informal internal differentiation can compensate for the lack of vertical external differentiation. In this respect, the German apprenticeship system resembles the American college system. While all apprenticeship diplomas/college degrees are formally equal, the training firm/college where they were acquired provides important additional information on the quality of training and graduate. Large innovative firms such as Mercedes Benz are, in that sense, the Ivy League of German apprenticeship. In addition, curricular differentiation may occur in the school-based component. In Baden-Württemberg, for example, one or two hours per week are dedicated to remedial teaching or further specialization, depending upon the progress of each individual apprentice (MKS, 1989).

The third type of internal differentiation, didactic differentiation, has been institutionalized as training counseling support ('ausbildungsbegleitende Hilfe'), paid

for and awarded by local labor offices to apprentices who run into trouble during their training. It is targeted on supplemental instruction in occupational or general subjects on the one hand, and on social-pedagogical counseling on the other. The exact support is targeted to individual needs, and varies between three and eight hours a week. Different organizations may offer this support (Heidelberger Institut Beruf und Arbeit, 1993). The extent of this type of support has grown rapidly, from 11,500 instances in 1988 to 55,000 in 1953 (Malkmus, 1994).

### 3.5.3 Sectoral differences in the governance of apprenticeship

The apprenticeship governance regime is a national regime that provides a framework for the governance of apprenticeship throughout the economy. But we have already touched upon some instances where sectoral differences occur in the elaboration of that general framework. One difference is in the comprehensiveness of sets of skills standards for an industry. The organization of employers in different associations may or may not result in separate 'Ausbildungsordnungen'. In construction, both the national employers' association for the craft construction sector and that for the construction industry have jointly negotiated with the construction union and agreed upon a common structure of training occupations for both sectors in the early seventies (Streeck et al., 1987; Hilbert et al.,1990; Johannson & Schuler, 1994). In the metalworking sector, there are separate training ordinances for the craft sector and for the metalworking industry (Streeck et al, 1987; Hilbert et al., 1990; Klein & Schlösser, 1994). And in banking, one of the three employers' associations has created its own specific training occupation, next to the general training occupation for the sector (Brötz, 1993).

Furthermore, sectors differ in the extent to which they use regional apprenticeship training centers (ÜBS). The use of these centers in construction exceeds that in others, since the skills standards explicitly require apprentices to undergo training in such centers for a specific number of weeks in each of the three years of training (Streeck et al., 1987; Hilbert et al., 1990; Johannson & Schuler, 1994). Employers' associations and unions feared that this requirement would seriously undercut construction firms' propensity to training, because apprentices cannot contribute to production while they are in the ÜBS. They therefore agreed on a collective bargaining agreement that created a levy system for the sector in the early seventies. All firms contribute a certain percentage (1993: 1,75%) of their wage sum into a training fund, from which training firms are partially compensated for the costs of their apprentices (Streeck et al., 1987; Hilbert et al.,1990; Johannson & Schuler, 1994). Since labor demand is highly erratic due to sector's high susceptibility for seasonal fluctuations in employment, a levy system can also help ensure an adequate supply of skilled labor over time. Both the peak organizations of employers and of unions were, however, opposed to the creation of this levy system in the construction sector.

At the time, these peak organizations were involved in a national political fight on financing of vocational training (cf. section 3.7.1). The peak labor organizations, as well as unions in other sectors, wanted a levy system for the entire economy, and nothing less. The peak employers' associations wanted no levy system at all, and considered a levy system in one sector a dangerous precedent (Streeck et al., 1987; Johansson & Schuler, 1994). The construction sector associations, however, in the end were able to have their way.

### 3.5.4 Conclusion: an associational governance regime

One dominant characteristic of the German apprenticeship governance regime is, thus, the prominent role played by associations: employers' associations and unions[34]. Hilbert et al. (1990) point to the development of 'private steering capacities' as an important aspect of the historical development of the apprenticeship system. At the end of the 19th century, the state dedicated important regulatory tasks for vocational training to 'Handwerk' employers' organizations. Employers' associations since then have fulfilled a double role in the governance of apprenticeship (Hilbert et al., 1990). On the one hand, the state has equipped them with a number of responsibilities. These give them the opportunity to pursue the interests of their members by providing regulation that better matches the demands of their members than state regulation would[35]. At the end of the 19th century, certain types of production were legally preserved for 'Handwerk' (cf. section 3.2.2), and the 'Handwerk' organization got the privilege to grant firms the right to train apprentices – and thus give them access to cheap labor, as well. 'Handwerk' thus got the chance to protect its position *vis-á-vis* the growing industry sector. On the other hand, the state uses employers' associations to stimulate firms to train apprentices in the desired quantity and quality. A similar pattern emerged in industry, and until the end of the 1960s, the state basically enabled employers' associations to regulate training.

By then, this traditional governance model proved less and less capable of satisfactorily integrating individual firms' interests and the collective interest in quality training (Hilbert et al, 1990). Training was increasingly considered below par, and firms increasing lacked the skilled workers to meet new challenges. This resulted in the 1969 BBiG. The most important changes were the creation of a central institute (today's BIBB) and the incorporation of unions in the governance regime, e.g. in the Chambers' training committees. While this has limited the power of individual firms and their associations, they still remain the dominant actors in German apprenticeship. Unions now play an important role as guardians of the quality and quantity of (the work-based component of) apprenticeship training. By demanding reforms and broad skills standards, they pressure firms and employers' associations to ensure a high and rising quality of training. Union involvement, in

turn, reinforces the position of employers' associations versus their member firms, since they can now hide behind unions for regulations they may consider necessary but which their members oppose.

Today, German associations of employers and employees are participating in apprenticeship policy in four ways (Streeck et al, 1987: 84-85):

- as lobby and interest representatives according to the classic model of pluralist interest politics;
- as suppliers in the market for training services (i.e. for training counseling support, cf. section 3.5.2.4);
- as vehicles for the formulation and aggregation of interests relevant to training policy, both within and between the respective associational systems;
- as vehicles for the exercise of public authority (i.e. as authorized bodies).

In addition to their involvement in specialized governance mechanisms for apprenticeship, employers' associations and unions simultaneously influence the governance of apprenticeship through their involvement in other institutions. Streeck et al. (1987) mention three types of other institutions that are relevant. At the level of individual firms, the system of co-determination grants works councils information and co-determination rights regarding the implementation of apprenticeship training. Second, employers' associations and unions participate in the various bodies of the Federal Labor Administration (Streeck et al., 1987), where they can influence its policy with respect to direct or indirect subsidies to support apprenticeship training or further training. Third and most importantly, however, employers' associations and unions influence apprenticeship through their collective bargaining agreements.

Collective bargaining agreements are in two ways relevant for the apprenticeship system. First, they determine the apprenticeship wage for the sector and region concerned (Beicht, 1994; Van Waarden, 1995b; Van Lieshout, 1996a). A monthly apprentice wage rate is established, which rises for each training year as demanded by BBiG paragraph 10. These rates apply to all apprentices covered by the bargaining agreement, irrespective of their training occupation. In order to make the hiring of apprentices attractive for firms, these rates are substantially lower than the wage rates for even unskilled workers in the same sector and region. Since there are virtually no young unskilled workers, it is hard to find suitable figures (Soskice, 1994). Casey (1986) presents estimates of apprentice wage levels for the early eighties ranging from 20% of the adult worker's wage for first year apprentices to 33% for third year apprentices. In 1992, an apprentice in the metalworking industry in the north of the German state of Baden-Württemberg earned 31.9% of the wage of a skilled worker in his first year, and 37.2% in his third year; an apprentice in commerce in the German state Nordrhein-Westfalen also earned 37.2% in his third

year, and 26.4% in his first year (OECD, 1994b: 143). For construction, our own calculations based on the 1993 collective bargaining agreement indicate that a third year apprentice received 60% of the wage of an unskilled worker of his age with one year's working experience, and 56% of a skilled worker (Van Lieshout, 1996a: 82). Note, however, that construction is the sector with the highest apprenticeship wages, and the fact that sectoral apprentice wage differentials are substantial (Beicht, 1994).

Second, collective bargaining agreements link apprenticeship certificates to certain pay levels (Steedman, 1993; Van Waarden, 1995b; Van Lieshout, 1996a). This makes the benefits of finishing apprenticeship training (in terms of a guaranteed pay level if one finds a skilled worker job in the sector) quite transparent for German youngsters. In addition, there is a reversed link between collective bargaining and apprenticeship: unions and employers' associations negotiate on the structure of training occupations, knowing that more complex training occupations will subsequently lead to higher pay levels. Thus, employers' associations occasionally plead for the creation of training occupations at different skills levels, whereas the labor movement explicitly aims for one high skills level for all occupations in a sector - as is actually the case for most sectors nowadays (cf. section 3.5.2.4).

## 3.6 Why do German youngsters opt for apprenticeship?

### 3.6.1 Seven reasons why German apprenticeship is attractive

Seven reasons help explain why such large numbers of German youngsters opt for apprenticeship training (Van Lieshout, 1996a: 59-73).

To begin with, there are no formal academic entry requirements that limit access to the apprenticeship system (cf. section 3.3.3). Even general secondary school dropouts without any diploma are free to enter into an apprenticeship agreement with a firm. Those who have proven not to be very good in school-based learning are thus not punished by being denied access to work-based learning. The only bottleneck is, of course, finding a firm. And, as compared to school-based systems, apprenticeship systems have been and still are more liable to ethnic and gender selectivity.

Second, there are hardly any school-based vocational education and training tracks that supply training equivalent to that in the dual system (cf. section 3.3.4). For those who can not (or do not) opt for higher education, apprenticeship is usually the only opportunity for full-fledged VET. Contrary to other countries (such as the Netherlands), German apprenticeship tracks have hardly any competition from school-based tracks, which is a very simple but powerful explanation for high apprenticeship enrollments.

Third, apprenticeship also receives little to no competition from regular youth

employment. The very large majority of employed German youngsters are current or graduated apprentices (cf. Van Lieshout, 1996a: 60). Den Broeder (1995) explains the virtual lack of regular youth employment by pointing at the part-time compulsory school attendance requirement. While this requirement obviously stimulates apprenticeship training in some way, it is an insufficient explanation for the lack of regular youth employment. In no way are young people forced to combine part-time school attendance with the work-based apprenticeship component; on the contrary, they are free to combine it with a part-time regular job[36]. Instead, the dominant reason for virtual lack of regular youth employment must be sought primarily on the supply side. As apprenticeship wages are significantly lower than regular wages, most employers offer entry positions for young people only as apprenticeship positions. They find it more attractive to hire youth as apprentices and train them on-the job (combined with productive work) for two to three-and-a-half years, than to hire them as a regular worker at a higher wage, and still having to train them on-the-job (cf. section 3.7). Either way, with few regular jobs open to young persons, and few full-fledged school-based VET options, apprenticeship is often the only real option for German youngsters – other than to continue full-time upper secondary and tertiary education.

Fourth, apprenticeship wages (while substantially lower than regular wages) are quite attractive when compared to the scholarships students receive when they attend full-time (vocational) schools. Apprentice wage rates are mostly established in collective bargaining agreements, and therefore may differ not only between training occupations, but also within the same occupation. The average 1993 monthly apprentice wage was 973 DM overall; 853 DM for year apprentices; 968 DM for second year apprentices, and 1087 DM for third year apprentices (Beicht, 1994)[37]. The extreme examples were men's tailor apprentices in Berlin, who only received an average of 270 DM a month[38], while scaffolding builder apprentices topped the list with an average of 1759 DM. 86% of apprentices that year, however, had a monthly apprentice wage of between 750 and 1150 DM (Beicht, 1994). The average apprentice wages are higher than the state scholarships that students in school-based upper secondary education are entitled to (cf. Van Lieshout, 1996a: 64-65). The extent to which youth will base their educational decisions upon the short-term financial consequences of available options is, however, probably negligible in comparison with the previous and following reasons. What is a case point, however, is the opposite reasoning: because apprentice wages (while higher than scholarships) are still quite low as compared with regular wages, it is difficult for young persons to postpone apprenticeship training into their twenties (cf. Soskice, 1994; 54).

In the fifth place, apprenticeship training generally provides good labor market prospects to its graduates. On the one hand, apprenticeship is the main port of entry into (industrial and service sector) firm's internal skilled labor markets

(Soskice, 1994: 53). On the other, the skilled worker certificate enables the graduate to secure skilled employment through the external occupational labor market. Apprentices themselves name a future permanent labor contract as their primary reason to start apprenticeship training; income expectations and career prospects are other reasons (BMBW, 1994). Their expectations are based on facts. Unemployment is more than three times as high for those without an apprenticeship certificate than for those that do have such a diploma (Davids, 1993; Tessaring, 1993). In 1992, 74% of metalworking apprentices, 71% of electronics apprentices, and 79% of service sector apprentices received a labor contract from their training firm (Schöngen et al., 1994). Collective bargaining agreements link apprenticeship certificates to attractive pay levels (Steedman, 1993; Van Waarden, 1995b; Van Lieshout, 1996a). Even when people apply for jobs in different occupations than the ones they were trained in, employers see the acquisition of an apprenticeship certificate as a positive element in recruitment and selection. And when those good labor market prospects somehow fail to materialize for a graduated apprentice, even the social security system has its own 'rewards' for them. Occupational unfitness ('Berufsunfähigkeit') has always been a separate insurance category besides labor unfitness ('Erwerbsunfähigkeit') in Germany (cf. CPB, 1997: 194; 209). Skilled workers are not immediately forced to accept an unskilled job when they become unemployed; and they are entitled to financial support for further training or re-training.

Sixth, completing an apprenticeship gives people access to interesting opportunities for further training. BS themselves, as well as various school-based VET forms (BAS, FOS, 'Abendgymnasium für Berufstätigen') that can be combined with apprenticeship training, provide opportunities to acquire (higher) general secondary diplomas (cf. section 3.3.4). But particularly important in this respect is the institutionalization of the FS (section 3.3.6). These schools train for interesting intermediate positions in the German labor market, and access is granted only to those with relevant apprenticeship training and additional work experience. Contrary to the Netherlands (cf. chapter 5), where young people have always faced a parallel choice between either a dual track for a frontline position, or a school-based track for an intermediate position, in Germany these tracks have been institutionalized sequentially (Van Lieshout, 1996a: 32). In order to gain access to the level for intermediate positions, one has to complete apprenticeship training first; so there is no competition between both types of tracks. In addition, there are over twenty arrangements for graduated apprentices to gain access to higher education (Dybowski et al., 1994; section 3.3.5).

And last, German youngsters are adequately prepared for their educational and occupational choices through a well-organized career advice system. This system starts with short internships in lower secondary education (Malkmus, 1994). In addition, there are mandatory career preparation classes in secondary schools, organized

by personnel from the career information centers ('Berufsinformationszentren') of the employment offices of the Federal Labor Administration. These are legally required to offer free career information to all citizens. For this task 140 local career information centers have been set up, and on top of that some mobile ones (BfA, 1994a). Following the career prep classes, young people and parents can visit these centers for further information or for private career counseling. 70% of all lower secondary students arrange a private career counseling meeting with these centers (Malkmus, 1994). In addition, the centers play an important intermediary role in the matching of supply and demand for apprenticeship. Since this service is free, and future apprentices will visit the career information centers at least once, most firms make sure to inform the centers of their apprentice openings for the coming year. The Federal Employment Office, for instance, recorded 667,238 apprentice openings in the year 1992/1993 (BfA, 1994a), whereas the number of new apprentices that started training in 1993 was 470,971 (BMBW, 1994). And, vice versa, the fact that at least a large majority of apprentice openings are known at the career information centers stimulates aspiring apprentices to visit them.

### 3.6.2 Is the appeal of apprenticeship declining?

Despite the massive participation in German apprenticeship, there is some debate about the declining appeal of apprenticeship. Steedman (1993) lists three reasons for actual and possible future apprentice shortages. First, demographic development has resulted in lower numbers of youths since 1981. Second, better-qualified secondary students increasingly opt for the higher education route. Third, better-qualified apprentices increasingly opt for service occupations, resulting in shortages in industry, construction and 'Handwerk' occupations.

In absolute terms, apprenticeship participation has grown from 49.4% of the relevant population in 1975 to 66.5% in 1990 (Tessaring, 1993: 136). But participation in higher education has grown at a faster rate than apprenticeship participation (Tessaring, 1993; Parmentier et al., 1994). A growing appeal of higher education does, however, affect VET participation to a lesser extent than in other countries. Many students first finish their apprenticeship training before starting a track in higher education. 36% of first year higher education students in 1992 had completed VET (BMBW, 1994). Some of these only gained access to higher education through their VET completion. But 18% of first year higher education students opted for VET although they could have entered higher education directly (BMBW, 1993)[39]. Their motives are that firms often prefer engineers with shop floor experience, and that apprenticeship completion opens the opportunity to fund higher education participation through well paid vacation jobs (Schöngen, 1993).

The popularity of this combination shows that the apprenticeship form itself is not the problem. Besides the obvious fact that more young persons now have

the necessary qualifications to enter higher education (cf. section 3.3.2), it is the better labor market prospects that higher education offers that explains its growing popularity. Higher education graduates have jobs with higher earnings, higher status, and face less unemployment (Tessaring, 1993); moreover, they are more satisfied with their jobs in almost every aspect (Althoff, 1994a). Differences in the popularity of various training occupations within the apprenticeship system also point in the direction that labor market prospects – not the tracks themselves - are the primary reason for declining appeal. Construction apprentices shortages, for instance, are connected to precarious labor conditions and circumstances in the sector (Clauß, 1993; Johannson & Schüler, 1994). And metalworking shortages were attributed to recent mass dismissals and apprentices who were not offered labor contacts upon graduation. Drexel (1993; 1994b) has pointed at the weakening position of the FS as an indirect reason for declining labor market prospects for apprenticeship graduates. 'Meister' and 'Techniker' are increasingly substituted in German firms by either top apprenticeship graduates or FHS graduates. While the former does obviously not weaken the labor market prospects of apprenticeship graduates, the latter does. Part of the attraction of German apprenticeship has always been the subsequent opportunity for progress to higher job runs through the FS. Thus, the attraction of apprenticeship as an institutional form does not appear to be waning. However, the appeal of 'Facharbeiter'-level employment may well be on the decline.

### 3.6.3 Improving the appeal of apprenticeship

Various possibilities exist to try and increase the appeal of apprenticeship in general or a specific training occupation in particular. One alternative is to raise apprentice wages. In general, apprentice wages rise when the supply of apprentices decreases: between 1989 and 1993, for instance, apprentice wage grew with approximately 40% (Van Lieshout, 1996a: 64). In construction, high apprenticeship wages are presumably a conscious strategy to compensate for the sector's image problems (very demanding employment with health risks) (Beicht, 1993). Second, recruitment activity may be intensified such as the creation of eight mobile information centers in the metalworking sector (Gesamtmetall, 1993). Third, one can try and make occupational employment more interesting by making training occupations more interesting and multi-faceted. 'Neuordnungen' offer the opportunity to do so (IG Metall, 1985; Johannson & Schüler, 1994). Fourth, general policy changes have been suggested. Examples are (Arbeitsgruppe Berufliche Bildung, 1994):

- more internal differentiation by allowing the most talented apprentices to gain additional qualifications during their apprenticeship;
- granting the intermediate diploma to apprenticeship graduates;

- increased access to higher education for apprenticeship graduates;
- increased training opportunities for skilled workers;
- increased upward mobility in firms.

Contrary to metalworking and construction, in banking the problem is not *recruiting* sufficient apprentices, but *retaining* sufficient apprenticeship graduates, as many banking apprenticeship graduates leave their bank for higher education. This requires other measures to ensure the lasting appeal of apprenticeship. One possibility is to recruit fewer apprentices with an 'Abitur' and more with lower certificates, as these are less likely to leave in order to pursue full-time higher education. A second possibility is to design new tracks that combine apprenticeship with further training within the bank and/or a dual higher education track. Various types of this type of 'Sonderausbildungsgänge' (cf. section 3.3.5) have been developed, in banking as well as in other sectors (Van Lieshout, 1996a: 75-77). Third, banks can decide to recruit apprentices for different (general economic-administrative) training occupations. For those occupations, banking is a very attractive employment sector, and they will be less inclined to leave for higher education.

## 3.7 Why do German firms opt for apprenticeship?

### 3.7.1 The collective result of individual choices

The decision to enter an apprenticeship contract is made completely voluntarily for both firm and apprentice. We have discussed the appeal of apprenticeship training for German youngsters in section 3.6.1. In most countries, however, the problem is not so much that apprenticeship is not attractive, but that the supply of apprenticeship positions is limited. The most intriguing fact about German apprenticeship is therefore the abundant supply of apprenticeship positions by firms in all sectors of the economy.

This fact is even more surprising because other countries often have institutionalized more collective institutional supports for apprenticeship training than Germany has. The (theoretically) strongest possible institutional support to overcome the poaching threat in VET markets is the collectivization of training decisions and funding. One option is a law requiring to spend a certain percentage of their payroll on training (as in France); another is the creation of a levy system in a sector (as in most Dutch sectors, cf. chapter 5); and the state can of course organize and pay for VET schools, and/or subsidize apprenticeship training in firms. There is no law requiring German firms to train; there is only one (significant) economic sector with a levy system (construction, cf. section 3.5.3); and training subsidies only play a minor role.

To begin with the latter, the state pays for the schools that provide related

instruction. However, the state does not pay for the in-company component of training, so that the individual training firms will have to cover these costs. At least as important, however, is the fact that German state policy has always resisted the temptation of financing full-fledged full-time school based vocational training that could compete with apprenticeship. Only when the supply of apprenticeship positions by firms fell short of demand in the early and mid eighties did state actors at various levels grant significant training subsidies to firms (Hilbert et al., 1990; Koch & Reuling, 1994). These were typically linked to specific causes such as the supply of apprenticeship positions for weaker groups, or in particularly disadvantaged regions. The training subsidies were directly abolished when the shortage of apprenticeship positions declined (Koch & Reuling, 1994). In addition to such subsidies, training capacity in the existing full-time vocational schools was temporarily expanded (cf. section 3.4.4).

As to levy systems: German firms and their associations have strongly *resisted* the idea of a levy system throughout history, whereas unions promoted such a reform. The most prominent example of this debate dates back to the early 1970s. When training supply decreased, the left-liberal government proposed serious training reform, with significant training components in ÜBS, and a levy system to finance them (Hilbert et al., 1990). This way, it would be easier to ensure the quantity and quality of training, and training costs would be more equally distributed across all firms – or at least that was (and sometimes still is) the perspective of German unions and the SPD. But a levy system would mean an increasing role for the state (or at least the unions), and German firms fear this would make apprenticeship more expensive because of increasing bureaucracy, and because more supervision of the work-based component might decrease the room for productive engagement of apprentices (KWB, 1985). And, through the levy, firms would still pay these higher costs themselves. Moreover, more state (or unions) involvement might imply a larger school-based component, and German firms are convinced that a school-based system will not offer the same quality training as their apprenticeship system. Hilbert et al. (1990) explain the resistance of employers' associations from the simple fact that these cannot condone legislation that would create higher costs for a large part of their constituency; and Chambers would face a decreased role after the proposed reforms.

Resistance of the employers' associations, supported by the political parties CDU and FDP has prevented such reforms. But an Apprenticeship Training Stimulation Act ('Ausbildungsplatzförderungsgesetz') was passed in the late seventies, which called for the creation of a levy system in case the supply of apprenticeship positions would fall below a certain threshold. The 'Bundesverfassungsgericht' (constitutional court) annulled this Act in 1980, however, because of technicalities relating to procedures. While it did not ban a levy system as such, the successor to the annulled act ('Berufsbildungsförderungsgesetz') no longer contained the levy-

system threshold. But the federal government could still create one if it chose to. And more than the occasional 'carrot' of training subsidies, the German state has used the 'stick' of threatening to impose a training levy if supply for training should fall short of demand (Hilbert et al., 1990; Koch & Reuling, 1994). To keep the state from imposing a levy system, individual firms have even been willing to train more apprentices than they themselves need, particularly in the early eighties (Hilbert et al., 1990). In addition to the federal and individual states, some municipalities have used 'sticks' of their own, in that they exclusively granted municipal orders to firms that trained apprentices (Hilbert et al., 1990).

But whereas the state threats to impose a levy system and subsequent appeals from employers' associations can help explain why some firms have trained above their capacity in the early eighties, they cannot explain why they maintained a regular training capacity in the first place. While the state, employers' associations and unions do stimulate the supply of apprenticeship positions by firms through various policies, the ultimate fact left to explain is why German firms (contrary to their counterparts in other countries) massively opt for apprenticeship training. The high volume of German apprenticeship training is, indeed, the collective result of a large number of individual choices. We will explore such an explanation in section 3.7.2.

However, we do need to stress that the role of the German state in shaping and enabling apprenticeship is, of course, far from negligible. It has invested substantially in creating and maintaining an infrastructure that enables firms in general, and smaller and more specialized firms in particular, to keep training apprentices. The legal protection that the German state provides for 'Handwerk' is an important historic foundation for the development of German apprenticeship. The 1969 BBiG does not force firms to train, but if they train young people of up to 18 years old, they are obliged to train them in an official apprenticeship occupation and in accordance with the rules of the corresponding governance regime. The German youth labor protection Act ('Jugendarbeitsschutzgesetz') that forbids particular productive activities for young people, enables exceptions to these rules just for apprenticeship training purposes (Van Lieshout, 1996a: 61). In the seventies, ÜBS were created to allow the federal minimum skills standards to become more challenging, while still allowing smaller, specialized firms that could not offer training for every single required skill, to keep training apprentices. The training-counseling program (section 3.5.2.4) has had a similar effect, in that it helps firms to retain apprentices with learning or other problems. And, again, but perhaps most importantly, the German states have continued to shape full-time school-based VET as either a gateway into apprenticeship, or as a pathway towards a higher general diploma, rather than an alternative for, or a rival to, apprenticeship tracks. These have been preserved as the lone gateway into intermediate labor markets.

### 3.7.2 Why do German firms opt for apprenticeship training?

Becker's human capital theory of course provides us with a first important clue as to how the large volume of apprenticeship training in Germany may be explained: German apprentices contribute to the costs of their training by accepting relatively low apprenticeship wages (cf. section 3.5.4).

Research on the costs and benefits of apprenticeship training in Germany shows, however, that the low apprentice wages and the productive contributions of apprentices jointly do not cover all costs; firms do invest in apprenticeship training themselves (Falk, 1982; Noll et al, 1983; Von Bardeleben et al, 1994a; 1994b; 1995). Depending on the exact type of cost calculation followed[40], only in 6.4% or 19.8% of the firms do apprentices' productive contributions (more than) compensate the costs of their training (Von Bardeleben et al., 1995: 54; 89). For all training firms, the average costs per apprentice per year after subtraction of their productive contributions (which average 11.711 DM) are 17.862 DM or 6.339 DM, again depending upon the type of cost calculation (Von Bardeleben et al., 1995: 70, 91). So while apprentices do pay a substantial part of the training costs by accepting the relatively low apprenticeship wages, we still have to explain the willingness of German firms to substantially invest in the transferable training that German apprenticeship training is.

That apprenticeship training is transferable is obvious. National skills standards regulate the (work-based component of) apprenticeship training (section 3.5.2.2), and independent examinations check whether apprentices have mastered these skills (section 3.5.2.3). At the same time, these skills are not completely general, as firms have room to include firm-specific elements on top of the minimum skills standards and/or implement the skills standards in a firm-specific way (section 3.5.2.2). Machinists, for instance, are trained on the machines of their firm, and may encounter different machines for the same type of work (e.g. milling) if they switch firms later.

To explain why German firms themselves invest substantially in a transferable type of training such as apprenticeship training, a second factor that springs to mind is the level of inter-firm labor mobility. One important factor that tends to limit firms' investments in transferable training is uncertainty whether workers will stay on long enough to recoup training costs. Why do German firms continue to train their own workers and retain them, rather than try to poach apprentices trained by a competitor?

Stevens (1994b: 557) hypothesized that the problem of a poaching externality is nil if training is purely specific, reaches a maximum at some intermediate level of competition/transferability, and drops again towards zero as the market approaches perfect competition, in which case training is either general, or a combination of general and specific. Katz & Ziderman (1990) and others (Stevens, 1994b; Soskice

1994) put forward the notion of asymmetric information that enables us to elaborate the dynamic behind this hypothesis. They point out that a training firm has better information on the skills of a particular worker than an outside firm that considers recruiting him. An outside firm can try to gather such information, but this will entail costs. Katz & Ziderman (1990) interpret this difference as if a training firm could therefore afford to pay the worker a higher wage than another firm does. This explains why firms may find it worthwhile to pay for (a part of the general component of) transferable training. The uncertainty about a worker's skills will limit the wage offered to him by other firms, and thus will limit the chances of him being 'poached'. Acemoglu & Pischke (1996) found empirical support for such an explanation.

While Katz & Ziderman's analysis shows how it can be rational for firms to invest in (the general component of) transferable training, it also leads them to conclude that (other things being equal) certification may lead to *less* rather than *more t*raining, as it effectively *reduces* the extent of asymmetric information between a training firm and other firms concerning a worker's skills (Katz & Ziderman, 1990: 1157). They thus correctly note that the German case actually provides an anomaly as to their general theory, because it combines high firm investments in transferable skills that are defined by public skill standards and certified through independent examinations.

They try to briefly explain this anomaly by pointing out that the German chambers strongly and effectively discourage competition for skilled workers. While there is certainly some peer pressure under German employers to each train their own apprentices, this explanation alone is far too weak. How could employers' associations continue to pressure their own members into a training policy if those individual members would find it ineffective and inefficient? Sections 3.5.4 and 3.7.1 offer a much more comprehensive and balanced overview of the roles employers' associations and unions do and do not play; and, in the end, they simply have not got the authority to force firms to train against their will.

Soskice (1994) provides a better explanation for the German high skill equilibrium in general, and the willingness of firms to invest in apprenticeship training in particular. His explanation continues upon a distinction from previous explanatory attempts between two categories of firms, which are believed to train for different reasons: medium-sized and larger (industrial) firms versus small ('Handwerk') firms (Casey, 1986; 1992; Steedman, 1993; Soskice, 1994).

*Medium-sized and larger firms*

For medium-sized and larger firms, Soskice (1994: 36-49) starts his explanation with the German financial and industrial relations systems, which provide incentives for firms to operate on internal labor markets for skilled workers. First, the relatively

high minimum wage level laid down in German multi-firm collective bargaining agreements (section 3.2.2) forecloses a low wage strategy for these firms. And the high level of employment protection (section 3.2.3) prevents strategies focused on external labor market flexibility and the rapid hiring and firing of workers. The only viable alternative for these firms, particularly in the face of international competition, is to equip themselves with a workforce with a skills level high enough to warrant these high wages through higher productivity levels. As a consequence, medium-sized and larger German firms typically aim at product market segments for high–quality goods and services. German firms have been particularly successful in 'medium-technology' sectors such as machinery and retail banking. These activities typically require both general and firm-specific skills. While a third or even half of their workforce may be semi-skilled, these firms do require a substantial core of skilled workers to successfully compete in these markets. And they will want to retain this skilled core as long as possible, and thus operate internal labor markets. This type of production strategy has been analyzed as 'diversified quality production' (Streeck, 1992: 1-40). Soskice (1994) seeks an additional factor that stimulates this type of production in the German financial system and in the system of corporate governance. The strong ties between German financial institutions and (large) firms, the high degree of coordination among them, as well as their ability to mostly block hostile takeovers, combine to provide a suitable, stable environment for the long-term product strategies that diversified quality production is.

Given this need for skilled workers, apprenticeship offers these firms the cheapest route to achieve it. German employers' associations and unions also set separate apprenticeship wages through collective bargaining, and consciously set these at levels substantially below regular wages (section 3.5.4). This makes it cheaper to hire and train young people as formal apprentices than to hire them as regular workers and provide them with extensive informal on-the-job training. Second, Soskice (1994:41) also points out that the fact that German youngsters perform well in lower secondary education (as evidenced by international test scores) also helps keep subsequent apprenticeship training costs low. As the skills standards spell out the minimum skills level they have to achieve in their training, the higher the initial skills level of the recruits, the lower the costs at which training can be accomplished (or the higher the skills level they can attain beyond this minimum). Third, Soskice (1994: 42) also interprets the support, advice and monitoring by Chambers and employers' associations as lowering training costs. Much relevant advice and information on training issues can be obtained for free from Chambers, employers' associations and unions (either from their staff, or through trainer circles that they organize). In a non-financial sense, the fact that monitoring of training is done by trustworthy external (Chambers, which are employers' associations) and internal bodies (as unions exert their influence primarily through these works councils that tend to have high-trust relations with management) minimizes what

might be called 'distrust' transaction costs.

Medium-sized and large firms are, however, left with substantially higher training costs than smaller firms at the end of training (Von Bardeleben et al, 1994a; 1994b, 1995). To recoup their training costs, they therefore need most apprentices to stay with them for a while. We have already seen that the average retention rate of apprentices is high in Germany; and it is positively correlated with firm size (Soskice, 1994: table 1.4). Training firms will in principle want to retain their apprentices. Apprenticeship is simply too costly to use it as just a screening device. Medium-sized and large firms screen apprenticeship *applicants* heavily, exactly because the idea is to retain them beyond graduation. Of course, apprentices could leave on their own account. But the German collective bargaining system makes inter-firm wage differentials relatively low to begin with and larger firms generally pay the highest wages. And as long as most firms train (and retain) their own apprentices, the number of job openings elsewhere is relatively low to begin with. In 1985, only 9% of firms with 100-499 workers had no apprentices; and only 0.5% of firms with 500-1000 workers did (Soskice, 1994: table 1.4).

The main alternative for firms to consider for training apprentices themselves would be to poach graduated apprentices from other firms. Focusing on recruiting graduated apprentices from other firms is a risky strategy in Germany for a number of reasons. To begin with, Soskice (1994: 45) points to the importance of firm-specific skills, and gives three reasons why it is cheaper to impart them during an apprenticeship, rather than to teach them to graduated apprentices from another firm. First, during apprenticeship, they can be taught at little cost since all general skills must be taught in the workplace to begin with – apprentices will acquire firm-specific skills almost by default in this process. Second, it is much cheaper to teach them to a low-paid apprentice than to a graduated apprentice earning the skilled worker wage. Third, these firm-specific skills are often instrumental in effectively employing general skills – which implies that a graduated apprentice from another firm may not be very effective (at his skilled worker wage) until he has mastered the firm-specific skills with his new employer.

A second reason why poaching is a risky strategy is that the number of apprenticeship graduates that become available in the external labor market is limited, as two-thirds of all apprentices stay with their training firm after graduation (section 3.4.4). Firms opting for a poaching strategy would risk being unable to fill all their vacancies. Consider the fact that the relatively high wage minimum level laid down in German collective bargaining agreements effectively limits the scope for a (much) higher wage offer to poach a worker; and also the fact that it is the larger firms that generally offer the highest wages. Furthermore, the wage raise automatically associated with apprenticeship graduation and the related transition from apprentice wage to skilled worker wage in a training firm is so substantial, that the extra DM occasionally offered by another firm will appear relatively pale (Van

Lieshout, 1998). Moreover, works councils monitor firm's wage structures, and it is not in their interest to allow firms to recruit skilled workers from elsewhere at the cost of their own apprentices, or at higher wages than the incumbent workers earn (Soskice, 1994: 46). Larger firms thus have a great chance to retain apprentices and recoup their investments (Casey, 1986; 1992; Soskice, 1994). Most of their apprentices are likely to stay with them, with the exception of a limited number who wish to leave for personal reasons (e.g. to pursue higher education) and those that the training firm does not wish to retain.

This leads us to a third reason why a poaching strategy would be risky in Germany. The quality of the available graduated apprentices will very likely be below average, because their absolute number is small, and training firms will retain their best apprentices, while letting the weakest go. Therefore, the external market for graduated apprentices will to an important extent be a 'lemon market' (Soskice, 1994; Van Lieshout, 1997a; 1998). Non-training firms face the double risk of not finding enough skilled workers and/or employing skilled workers of a relatively poor quality. Apprenticeship training thus really does make sense in the German context, and almost all medium-sized and large firms train their own apprentices.

Soskice (1994: 47-49) has translated the core of this explanation in a two-by-two apprenticeship game, where apprentices can stay or quit, and firms can train or hire. The options of staying and training correspond to the German situation. Soskice distinguishes two conditions under which this combination of options constitutes a Nash equilibrium. The first is that apprentices will stay as long as the benefits of staying outweigh the benefits of a low probability to find the most preferred job elsewhere. The second condition is that firms will train, as long as the costs of apprenticeship training are less than the costs of firm-specific training for external recruits plus the costs of risking recruitment of a 'lemon'. As long as most firms choose to fill their internal labor markets through training, this high-skills equilibrium is the only one possible. Below a certain threshold, a low-skills equilibrium of quitting and hiring becomes a second possibility.

*Small firms*

Having explained why medium-sized and larger firms train, it is difficult to use exactly the same explanation for small firms and firms from the craft sector. The retention rate in firms with 10-49 workers is lower (64%), and significantly fewer firms (59%) train apprentices than is common among large firms (Soskice, 1994: table 1.4). The net costs of apprenticeship are lower (Von Bardeleben et al. 1994a; 1994b; 1995), and the previous credentials of apprentices are weaker.

The traditional explanation is that 'Handwerk' firms are primarily interested in apprentices as cheap labor, for their productive contributions during the training period. (Casey, 1986; Steedman, 1993). Casey (1986) presents three arguments

for this theory. First, apprentices stay longer with large firms than with small firms. Second, while large firms vary their training efforts pro-cyclically, training capacity in small firms fluctuates anti-cyclically: they have trouble finding apprentices in a flourishing economy, and much less so in a recession. Third, small and 'Handwerk' firms train structurally above capacity. In 1980, the apprentice to worker ratio was 6% for industry and commerce, but 18% for 'Handwerk' (Casey, 1986).

Nevertheless, Soskice (1994: 49-52) is correct in pointing out that apprenticeship in such firms is also structured, monitored and certified – so there is no evidence that those apprenticeship positions are artificial and just a source of cheap labor. He does suggest that, primarily due to the lower retention rate, the net cost of training apprentices for such firms is likely to be higher than the cost of hiring skilled workers who have already been trained. This begs the question why many of these firms still train apprentices. Soskice tries to explain this by hypothesizing why the traditional training cost estimates were likely to overestimate training costs in small firms (but not in large firms). One reason is the fact that training in small firms can often be done in slack periods, so that it will not cost production time (e.g. a hairdresser will train an apprentice when there are no customers he/she has to attend to). Another reason is the fact that apprentices can often contribute to production in these firms by doing un- or semi-skilled work early on (e.g. sweeping the floor in the hairdresser's parlor).

Since Soskice's article, new German training cost research (Von Bardeleben et al, 1994a; 1994b: 1995) has become available. It shows that, even when the costs of part-time trainers are not included, apprenticeship does cost 'Handwerk' firms and small firms money (DM 1,647 and DM 400 respectively). However, these costs are low. To cover these modest costs, relatively small benefits from apprenticeship training in the period after training will be due. And, while the retention rate is lower than in large firms, still more than half of the apprentices will stay on in small firms. Soskice (1994), surprisingly, only includes the retention rate in his analysis, not the period of retention. But if one out of two apprentices stays on, and there are benefits in employing your own graduated apprentices above employing an external recruit, the (relatively small) training costs for all apprentices might still be recouped by small and 'Handwerk' firms over the first couple of months after training.

Besides the direct benefits (the productive contributions of apprentices), it is therefore the indirect benefits of apprenticeship training that help explain why firms in general, and small craft firms in particular, are willing to bear (some) training costs. Von Bardeleben et al. (1994a; 1994b; 1995) distinguish the following indirect benefits for firms that train apprentices:

- lower recruitment and selection costs;
- lower costs of firm-specific training (as this occurs alongside apprenticeship training at a low apprentice wage);

- lower wage costs because one does not have to lure away skilled workers elsewhere;
- lower risk of wrong recruitment decisions (as one can screen apprentices for three years);
- low turnover costs (as apprentices are relatively faithful to their training firm);
- positive image for training firms[41].

In their calculation of apprenticeship training costs and benefits of the large firm of AEG, Cramer & Müller (1994) point at additional indirect benefits:

- a flexible deployment of personnel;
- savings on temporal replacements for workers on holiday or sick leave;
- a lower risk on future personnel shortages.

Von Bardeleben et al. (1994a; 1994b; 1995) and Cramer & Müller (1994) have each estimated some of these indirect benefits, although they have not estimated all of them. Still, they all agree on their conclusion that apprenticeship training pays off for firms.

## 3.8 Conclusions

### 3.8.1 A high-skills, high-training equilibrium

The German apprenticeship system constitutes a high-skills, high-training equilibrium. Within the German institutional (education and labor market) environment, it makes sense for the large majority of German youngsters (section 3.6.1) as well as German firms to invest in apprenticeship training (section 3.7.2). It is important to realize that there are feedback effects between these two separate facts that account for the remarkable stability of this high-skills equilibrium over time.

Soskice (1994: 33) has pointed out that German apprenticeship is a rank-order tournament. Not each apprenticeship position is equally attractive, and school-leavers rank apprenticeship across sectors, firms, and even within an individual firm. The situation is similar to prospective American college students that are keenly aware of the varying appeal of potential universities and colleges, across disciplines, universities and even within colleges. German youngsters actively compete for the best apprenticeship positions, as career prospects differ with the occupation and firm in which one is trained, and (the more attractive) firms carefully screen school performances of applicants, and often administer their own tests as well. This creates an important feedback effect: German children are stimulated to work hard in school in their early teens, as they will be rewarded for their efforts by a more attractive apprenticeship position in their late teens.

This feedback effect causes another feedback effect, however: because young

people tend to work hard in school in the years before apprenticeship, German firms get apprentices with a relatively decent (general) skills basis. This helps them to keep training costs low, as compared to firms in countries where 16-years-olds are less well equipped.

So the German case shows, that as long as children already start working hard in school, and firms reward their efforts with attractive entry jobs with career prospects, a stable high-skills equilibrium in the market for intermediate skills is possible. Our next case, the U.S., will explore why it is so much harder to achieve than this German example might indicate. Before turning to that task, there are two points worth emphasizing on the particular nature of the German 'market' for intermediate skills: firstly, that it is a regulated market, and secondly, that it is a labor market where occupational and internal markets overlap.

### 3.8.2 A separate, regulated youth labor market

VET and the integration of (non-college bound) young people in the German labor market occur in a separate youth market for intermediate skills. This separate market is regulated by a separate law; but this law lays the basis for a governance regime that strongly relies on self-governance through the social partners: employers' associations and unions (section 3.5.4). This separate market is a highly institutionalized one, in which several rules limit the range of options open to (aspiring) apprentices and firms. What is regulated is in essence the separate status of the apprentice, and related conditions for his/her training and employment. But it is a market, in the sense that both firms and young people are free to enter, and have to find suitable matches themselves.

The market they can voluntarily enter is embedded in several institutional arrangements that enhance its functioning. Market regulation begins with the regulation of apprenticeship contracts. Two aspects are particularly important here. First, all firms that train young people under 18 are bound to the same basic general governance regime as defined by the BBiG, because BBiG paragraph 28 explicitly forbids the training of youngsters under eighteen in other training occupations (cf. section 3.5.2.1). Second, all firms in Germany that train apprentices in a certain occupation are bound by the same, federal skills standards document that defines the competencies for which they should train the apprentices, and the minimum level of those competencies that they should attain.

On the supply side of the market, there are some standards that training firms have to meet before they are even allowed to train apprentices: they have to have a qualified trainer, and be able to offer full-fledged training in the occupation concerned. These standards are checked in advance by the various authorized bodies that also monitor training progress (section 3.5.1). Training itself is regulated by national skills standards that define the minimum knowledge and skills to be taught. And

there are standards that regulate the exit from this market, through examinations and certification (section 3.5.2.3). Apprentices that pass the exam get an officially recognized certificate as a skilled worker, which represent a high value on the labor market, as it provides access to occupational labor markets for skilled labor (section 3.6.1).

The regulation does not rule out the market mechanism, but supports it in a number of ways. First, the fact that apprenticeship training is offered for a limited number of training occupations makes the apprenticeship market quite transparent in comparison with an unorganized labor market, where training tends to be informal, and job- and firm-specific. This helps young people to choose their occupation, and it helps both employers and apprentices to swiftly recognize relevant job openings/ applicants.

Matching of supply and demand is further improved by the fact that the apprenticeship market is bound to a certain time frame. To begin with, Soskice (1994) has noted that the relatively low apprenticeship wage stimulates 16-19-year-olds to opt for apprenticeship at that time. The investment is much harder to make when one grows older, and financial responsibilities for one's own family and home have grown correspondingly. So firms are ensured of a large supply of young candidates from which they can choose.

Second, the precise yearly timing of the apprenticeship market has its advantages (Van Lieshout, 1996b). Apprenticeship generally starts in September, with the new school year, when the apprentices simultaneously enroll in related instruction at the BS. Most of next year's apprentices are today's last year students in lower secondary general schools. The rank-order tournament nature of apprenticeship stimulates both firms and future apprentices to start their search for one another relatively early: several months before. But to enable the young to finish the full-time school they are currently enrolled in, the actual start of apprenticeship training only takes place at the beginning of the following school year. This provides both parties with a clear time path for their search. Starting early, both parties can first pursue their ideal candidates/positions. At the approach of the September deadline, firms with remaining vacancies and youth without a contract will have to reconsider their preferences. They either decide to settle for a less qualified applicant/a less attractive position than they had originally hoped for, or take their loss and postpone their search by a full year. The extended search period gives both parties the time to explore that year's market, and to adapt their aspiration level accordingly if need be. The advice and mediation of the career centers, through which both parties often find another, help ease this process.

An important precondition for the attractiveness of this separate apprenticeship market for individual parties on both sides is the combination of a relatively low apprentice wage with national skill standards and certification. While more general entry, process and exit requirements are contained in a law, the more precise

regulation of apprenticeship through skills standards and apprentice wages is left to employers' associations and unions. While the skills standards bargaining process has no formal ties with wage bargaining for regular workers, both parties are quite aware of the relations between both processes. Unions, for instance, realize that, the higher the skills level is which apprentices achieve, and the more homogenous the workers are in their sector, the greater their bargaining power will be in future wage bargaining - with relatively higher wages as a likely result (cf. section 3.5.4). Thus, these are associations that coordinate the links between the separate youth market and the regular labor market for their sector.

Bargaining on skills standards thus provides employers' associations and unions with a direct grip on the level of training in their sector. Both parties cannot, however, raise required skills level indefinitely: the more demanding the standards, the smaller the number of firms that is able (or can afford) to meet them, which could ultimately result in a shortage of apprenticeship positions (Koch & Reuling, 1994). This also explains why it is logical to set *minimum* standards for apprenticeship training: there is no reason to prevent firms that want to provide more training from doing so (and many, particularly larger, firms do), but requiring a maximum level from every training firm would disrupt the apprenticeship market and leave many young people without an apprenticeship position.

The fact that collective bargaining agreements in Germany relate the completion of apprenticeship training to a particular wage level means an important step in the reduction of the uncertainty on the part of youngsters. Knowing that apprenticeship training will subsequently lead to a high wage level guaranteed by a collective bargaining agreement makes it worthwhile to undertake apprenticeship training and accept the related low apprenticeship wages. Only because unions succeed in negotiating relatively high regular wages can they ask their (future) members to settle for low apprenticeship wages; and only because they enable apprenticeship training at relatively low costs can they demand high wages from firms for skilled workers.

And only because most firms train most of their own future workers, can they rely on being able to retain their apprentices long enough to recover their training investments.

### 3.8.3 Overlapping occupational and internal markets

This way, the apprenticeship systems lay the basis for overlapping internal and occupational labor markets. Occupational labor markets are external markets that are based on occupational qualifications that allow workers to move to another firm while remaining within their occupation (Sengenberger, 1992). Germany is known as a country where relative large numbers of workers are employed in occupational labor markets (Sengenberger, 1987; 1992; Soskice, 1994; Marsden & Ryan, 1995).

These occupational labor markets are solidly founded in the apprenticeship system. Skills standards define (training) occupations, while examinations and certificates ensure that the apprentice's skills will indeed be transferable enough to employ him in a similar job with a different firm. Apprenticeship graduation serves as the entry ticket to the occupational labor market. In the German artisanal sector, occupational labor markets are indeed dominant. Due to the generally small size of the firms, internal labor markets play a relatively minor role there. But the entire regulation of 'Handwerk' (cf. section 3.2.2) ensures that artisanal trades function as occupational rather than unorganized labor markets, with apprenticeship and subsequent 'Meister' training as the key organizing principle for such markets.

In the larger firms in industry and the services sector, occupational markets and internal markets exist alongside each other. In fact, as we saw in section 3.7.2, the entire basis for apprenticeship training is provided by the choice of medium-sized and large firms to train apprentices for their own internal labor markets, as a part of a more general production strategy. While the method to the 'madness' of massive apprenticeship training by these firms is thus to train for their internal market, they need to do so in the context of the apprenticeship system in order to be able to profit from the low apprentice wages. Thus, all youth training of medium-sized and large German firms for their internal markets still abides by the national occupational skills standards and certificates. While their apprentices will usually stick with their training firm for a while, these certificates do ease transition to similar jobs in other firms, if need be. The skills standards documents thus link jobs in internal labor markets of different firms, and help organize a transparent external market. The fact that they are minimum standards (designed with the knowledge that enough firms in a sector must be able to meet them in order to guarantee an adequate supply of apprenticeship positions) gives firms leverage to accommodate their training program to their own specific needs, as does the fact that the standards specify levels of competency rather than specific training methods (Adler, 1994; Koch & Reuling, 1994; Van Lieshout 1996a).

This overlapping of occupational and internal labor markets in Germany creates an interesting paradox. The national skills standards and examinations for apprentices lay a rock-solid foundation for occupational labor markets that ease transition of workers from one firm to another. Still, this theoretical possibility is relatively seldom realized in Germany. Inter-firm mobility is much lower in Germany than in the U.S., for instance. The explanation is that, as long as most firms train sufficient workers for their own internal labor markets, which is the case in Germany, inter-firm mobility will still be limited simply because there is little need for this. The American situation is quite the opposite, as we will see in the next chapter.

To conclude our analysis of Germany, we will have to point out that, while occupational labor markets are important, the way their foundations are shaped in apprenticeship (in particular since the seventies) also consciously produces the

potential for inter-occupational mobility. The creation of overlapping training contents among related training occupations has become an explicit policy goal with respect to the development of skills standards. This goal is achieved by a persistent expansion of the contents of training occupations and a reduction of the total number of occupations. Cases in point are the release of new sets of skills standards for the construction sector in the late seventies and the metalworking industry in the late eighties (Koch & Reuling, 1994; cf. sections 3.5.2.1, 3.5.2.2., 3.5.2.4). Thanks to this overlap, mobility in Germany is not limited to the training occupation, but can also take place within a firm to another related occupation. Here, we face an important additional contribution of the German industrial unions to the governance of the apprenticeship system. This policy choice contrasts with those of craft unions (such as in the U.S. and the U.K.), who have tended to opt for detailed regulation of jobs as one of their prime policies to secure their members' employment. These regulations have subsequently limited firms in the possibilities of flexibly employing their employees in other jobs or occupations within the company.

## Notes chapter 3

[1] Compare Crouch (1993: 14) and Freeman & Katz (1994) for an overview of some (contested) classifications of national industrial relations systems.
[2] Other data on enterprise tenure show German-Dutch differences for 1985 and 1991: 8.5% versus 11.7%, and 12.8% versus 24%, respectively (OECD, 1996b: 168). There are underlying differences in data acquisition, however, and Dutch data cited in this source show by far the largest difference; so either something has changed structurally there, or there may be serious data comparability issues with the Dutch 1991 figure.
[3] Average earnings in purchasing power were more or less comparable for both countries that year. While the average hourly compensation in purchasing power was 119 in Germany as compared to 100 in the U.S., Americans worked more hours than German workers to the equivalent of one month a year (Freeman, 1994b: 3; 11).
[4] Those who start apprenticeship after age 18 are not required to attend BS, but may do so voluntarily, with the same rights and obligations (Hochstetter & Muser, 1992).
[5] In most states a fourth type exists: 'Gesamtschulen'. These combine the three other tracks in one way or another; and all three diplomas can be acquired there (KMK, 1994). There are some other types of general secondary education, which exist in only one or a couple of states.
[6] A special educational opportunity at a 'Berufliches Gymnasium' are so-called 'doppelqualifizierende Bildungsgänge' that train students simultaneously for access to higher education and a vocational qualification. 'Kollegschulen' in Nordrhein-Westphalen are an example (Münch, 1994).
[7] Apprentices are obliged to attend related instruction (as well as any other training component provided elsewhere, such as at an ÜBS), and firms are obliged to allow them to do so (BBiG sections 7 and 9). The actual alternation between school- and work-based components can take different forms, but weekly BS attendance is the standard. Interviews in 1994/1995 did, however, indicate that BS at the time often lacked sufficient personnel to achieve the required hours minimum.
[8] An alternative is a training alliance ('Ausbildungsverbund') with another firm. In a training alliance, firms contractually agree that an apprentice of one firm will take a certain part of his training in the other firm. The reason for this usually is that one or possibly, both of the firms are not able to provide all training components themselves (Koch & Reuling, 1994). A good example is a photographer who does not have his own darkroom and therefore contracts with a colleague who does have one to arrange darkroom training for the apprentice. In 1987, 7% of training firms participated in a training alliance or cooperated in some other way (BMBW, 1989). This relatively low number is explained by the availability of ÜBS for similar problems: they are easier to find and to contract with than another firm, and they involve less risk of the apprentice moving to one of the other firms in the alliance upon graduation. Training alliances remain a good solution, however, for training firms in regions or sectors where ÜBS are lacking.
[9] In the probationary period either party may terminate the contract anytime (BBiG paragraph 15). This period shall be at least one month and not more than three months (BBiG paragraph 13).
[10] Data from the Datenbank BIBB.
[11] Outside the realm of the education system, preparatory arrangements ('berufsvorbereitende Maßnahmen') provided by the federal labor office (Bundesanstalt fûr Arbeit) fulfill roughly similar roles as BVJ and BGJ. Cf. Van Lieshout (1996a: 91, 94) for more details.
[12] Enrollment and graduation figures presented here for the various types of BFS are for entire Germany. Of all enrollments in all types of BFS that year, only 10% took place in the new Eastern states. For the various types of BFS, alas, such regional specifications

were not reported (StBa, 1994).
[13] In 1994, 514.500 people took a final apprenticeship exam in (West-) Germany (BMBW, 1994: 74). Of those, 4-5% took the exam as an external assessment procedure ('Externenprüfung'), without undergoing apprenticeship training (BMBW, 1994: 75). This implies that 491.300 completed apprenticeship training and subsequently took the exam. Given the exam's success rate of 88.2%, this implies that roughly 433,300 apprentices acquired the vocational qualification ('Berufsabschluß') that year (BMBW, 1994: 75).
[14] Health care education in Germany is a separate case and an exception. This sector exclusively has school-based tracks provided by specific health care schools (mostly linked to hospitals), that deliver both theoretical and practical training. Tracks are classified at a level between upper secondary and tertiary education (CERI, 1995). The schools differ, partly because they are regulated at the state level (Münch, 1994).
[15] Since the time of this research, both Germany and the Netherlands have further developed their higher education systems to implement the bachelor-master model according to a European agreement.
[16] In addition to these certificates, some (mostly, technical) higher education tracks may pose additional entry requirements, such as an orientation internship in the relevant occupational field (KMK, 1994).
[17] This implies that participants will at least be 18 years old. For young people over 18, paragraph 28 section 2 BBiG (which stipulates youngsters can exclusively be trained in official apprenticeship occupations) no longer applies. Also, these youth will have met compulsory education requirements. This creates the opportunity to create work-based tracks, for which the related instruction is provided by other schools/colleges than the Berufsschule.
[18] To be complete: some other states have types of BA that differ from this model (KMK, 1994). The Baden-Württemberg model is, however, the dominant one.
[19] After two years, students can first achieve an 'assistant' diploma.
[20] Either the firm owner or the chief executive running it must be a master.
[21] The group of 16-19 year olds peaked in 1981 (BMBW, 1993).
[22] Cf. Streeck et al. (1987) for an extensive overview.
[23] Since Chamber membership is compulsory and the chamber budgets consist essentially of membership dues, financing from Chamber budgets ensures that all firms in the region contribute to the costs, just like a levy system does. Compulsory membership is the advantage Chambers have over other (sectoral) employers' associations in being in a position to demand contributions from all firms, instead of only from firms that train (Streeck et al., 1987).
[24] These rights stem from both the 'Betriebsverfassungsgesetz' and the 'Mitbestimmungsgesetz'.
[25] Section 3.6 will touch upon other institutional configurations underlying/reflecting the importance of 'Berufe'.
[26] Cf. endnote 16 to this chapter.
[27] The remaining high number of very small training occupations shows that the policy did not follow quantitative targets.
[28] To be exact: in the extensive and influential process of the modernization of the training occupations in metalworking, which we will discuss shortly.
[29] In 1984, they also agreed on framework skill standards for the general subjects of economy and social studies in KMK (Benner, 1992).
[30] See Benner (1992) for a detailed overview of the procedure; Van Lieshout (1996a: 42-44) summarizes the procedure in Dutch.
[31] These are included in the firm's training plan (betrieblicher Ausbildungsplan). Firms also have the freedom to depart from the substantial and temporal ordering (Adler, 1994).
[32] In the case of construction, the collective bargaining agreement stipulates that

graduates from the two-year occupations are classified one wage group below graduates from the three-year occupations.

[33] For the handicapped, there are opportunities to achieve diplomas at a lower qualification level, if necessary. BBiG allows Chambers to issue local training regulations for this purpose.

[34] Besides the various formal roles and functions we have already discussed in previous sections, various employers' associations and unions also organize networks of trainers of various firms ('Ausbilderkreise') that exchange information on training experiences. Many trainers, and even training managers, are active union members, and meet in union trainer circles, or in vocational training committees that develop union policies at the regional, state or national level.

[35] On the flip side, this authority will occasionally get employers' associations into the position that they will have to confront their member firms, e.g. when a Chamber denies a firm the capacity to train for a particular occupation, or when a national association agrees to more demanding skills standards for a training occupation.

[36] In addition, most states offer a full-time one year alternative to fulfill the part-time obligation (Steedman, 1993), so those who want to free themselves for full-time regular employment as soon as possible, can do so.

[37] Apprentices pay social security premiums from these wages, and are thus insured (Tessaring, 1993).

[38] The lowest paid apprentices can get supplemental income aid, depending upon their parental income (Becith, 1994). 25,000 apprentices received some in 1993 (BfA, 1994b: 293).

[39] Indirectly, a high progression from apprentices to higher education may damage apprenticeship because training firms are not able to recoup their training costs for apprentices that leave upon graduation (Quack et al., 1994).

[40] Measuring training costs and the productive contributions of trainees involves numerous theoretical and methodological issues and problems (cf. Von Bardeleben et al, 1991). The difference between both methods used by Von Bardeleben et al (1994a; 1994b, 1995) depends upon whether one includes or excludes the costs of regular workers that spend part of their time instructing apprentices. Both methods have disadvantages. Excluding these costs underestimates total costs; including them would, however, assume that the time spent on instruction would otherwise have been fully used for productive activity, which is doubtful (Casey, 1986). Anyway, the research by Von Bardeleben et al. is the best attempt around to measure costs and benefits of training at the firm's level. It generally confirms the findings of previous German research (SKF, 1974; Falk, 1982; Noll et al., 1983) while improving the methods applied.

[41] German training firms, when asked for their motives, often refer to 'Kukis' and 'Mikis': 'Kundenkinder' and 'Mitarbeiterkinder'. The point being, that the apprentices trained are often the children of either customers or workers, and either way will enhance the firm's prestige in the community.

# 4 The American market for intermediate skills: the case of Wisconsin

## 4.1 Introduction

After analyzing a high-skills equilibrium in the previous chapter, we now turn to the analysis of a market for intermediate skills that has been described as a low-skills equilibrium: the American one. The U.S. seems to lack an appropriate alternative for apprenticeship to guide the majority of American youngsters that does not transfer to a four-year college, to promising starting jobs. Many of them drop out of high school (Veum & Weiss, 1993; Lynch, 1993), which implies that they enter the labor market without any diploma. Most of them enter the labor market without any formal vocational credentials (Büchtemann et al., 1993). And American youth unemployment is consistently and substantially higher than in Germany (Büchtemann et al., 1993; OECD, 1996b: 114) – though the good news is that individual spells of youth unemployment in the U.S. are seldom of long duration, as compared to Germany or most other European countries (OECD, 1996b:115).

These and other problems have triggered reform policies to improve American VET. American researchers and policy makers have argued for a strengthening of dual training tracks in the United States (cf. Hamilton, 1990). While the United States has a tradition of apprenticeship systems, participation has been low and declining. In addition, American apprentices tend to be in their mid-twenties rather than in their late teens, as in Europe. In 1986, from individuals aged 21-29, 2.4% of the men and only 0.6% of the women had participated in an apprenticeship program, with an average training intensity of 700 hours (Veum, 1993). The first Clinton administration announced an initiative to create a national *youth* apprenticeship system, similar to the German one (Büchtemann et al., 1993). While such a national youth apprenticeship system was never implemented, the initiative did result in the 1994 School-to-Work Opportunities Act. This act aimed to improve the transition from school to work for American young people through a variety of programs, of which youth apprenticeship is one example.

Besides strengthening work-based learning, the creation of a comprehensive qualification framework of nationwide skill standards is seen as a key factor in American VET policies around that time (Büchtemann & Soloff, 1994). Here too, Germany was among the countries that served as an example. National skills standards define a minimum level of competency in various skills that German apprentices must attain when they are trained in a particular occupation (cf. section 3.5.2). Training contents in the U.S. are much less general than in the German dual training system, and the lack of an accepted national system to recognize and certify national skills was seen as an important cause for this (Lynch, 1993); hence the attempt to create such a system.

Because of the size of the U.S., its federal state structure, and the significant differences in education and training systems and labor markets between various individual states, our study of the American skills equilibrium concentrates on one particular American state: Wisconsin. Wisconsin was chosen for two reasons that make it an attractive candidate for a comparison with the Netherlands and Germany. First, Wisconsin's two-year colleges (called technical colleges) are a specific, more vocationally oriented type of two-year colleges that offer full-time school-based VET, related instruction for the apprenticeship system, and adult and continuing education. This makes them resemble the new regional education centers in the Netherlands (chapter 5). Second, Wisconsin has a somewhat wider experience with apprenticeship systems than most other states. It was the first state to pass a 'modern' apprenticeship law in 1911 (Paris, 1985), and it was building a new youth apprenticeship system in the 1990s.

The approach used for this case study was similar to that used for the case study of Germany (Van Lieshout, 1996a). It consisted of a combination of desk research and interviews. The desk research has entailed a study of relevant statistical sources, research literature, policy documents and other sources. In addition, representatives of organizations involved in the governance of VET and labor markets were interviewed: federal and Wisconsin state departments and agencies; employers' associations and unions in construction, metalworking and banking, as well as state and federal peak associations; high schools and technical colleges; metalworking firms; and academic VET and labor market experts. Due to the differentiation of American VET governance across federal, state and local levels of government, educational systems, and public and private sectors, a total of 92 interviews were conducted between September 1995 and May 1996. The Industrial Relations Research Institute (IRRI) at the University of Wisconsin-Madison provided a stimulating home-base, and the Center on Wisconsin Strategy (COWS) and the Center on Education and Work (CEW) provided valuable additional assistance. Outside Wisconsin interviews were conducted in Washington, DC (representatives of the federal government, national employers' associations, unions, research organizations and a college association), Illinois, New York City and California (VET experts). A return trip to Wisconsin in 1997 provided the opportunity for some updates.

This chapter has been organized differently than the German one. To begin with, while the German market for intermediate skills is pretty much governed by one single, coherent governance regime (apprenticeship), governance of the American market for intermediate skills is a patchwork of different (sub)systems. VET takes place in secondary schools, two-year/community/technical college systems, apprenticeship systems, and in private post-secondary schools and colleges. Section 4.2 gives an overview of these types of American education and training, and the specific versions of them as they exist in Wisconsin. Second,

while apprenticeship governs the school-to-work transition in each of the three sectors in Germany, the market for intermediate skills is governed quite differently in American construction, metalworking and banking. Section 4.3 will illustrate the actual workings of the markets for intermediate skills in these sectors. Section 4.4 will analyze the American low-skills equilibrium and address the question why both American youngsters and firms do not invest as readily in broad training as their German counterparts do.

The second part of this chapter will subsequently deal with reform policies that were pursued at the federal and state levels at the time to improve the institutionalization of the American market for intermediate skills. Section 4.5 reviews federal policies of this type in general, and the federal school-to-work policy, as well as the federal skills standards policy, in particular. Section 4.6 deals with similar policies on the level of the state of Wisconsin. Wisconsin VET policies are clearly influenced by federal policies but are not completely determined by them. The section focuses on Wisconsin's school-to-work policy and on the role of (skills) standards and assessment procedures in the various education and training systems in Wisconsin. It also portrays the development of a training partnership between a number of manufacturing firms and unions in the Greater Milwaukee area, focusing on training issues: the Wisconsin Regional Training Partnership (WRTP). Finally, section 4.7 will discuss the prospects for reform of the American low-skills equilibrium.

## 4.2 American VET - the case of Wisconsin

### 4.2.1 The American education system

*Decentralized governance*

The American education system is very decentralized. The American constitution does not make the federal government responsible for education: it is thus the province of the individual states. Only since 1979 has there been a federal Department of Education (DOE), whose existence is still occasionally contested by Republicans (Münch, 1989: 7). DOE tries to influence state VET policies through programs that grant states funds for specific services or policies. Within the states, primary and secondary school districts fulfill crucial roles. They decide on expenditures, they hire teachers, and draft curricula (Münch, 1989: 18-19; NCES, 1994: 62; CERI, 1995: 316). In higher education, individual colleges have a considerable amount of autonomy (Münch, 1989: 22). Despite this decentralized governance regime, the basics of the American education system are alike throughout all states.

*Primary and secondary education*

One important characteristic is a sharp demarcation between primary and secondary education on the one hand, and post-secondary education on the other. Primary and secondary education together is often referred to as the K-12 (Kindergarten through to twelfth grade) system. Before grade 1, young children attend Kindergarten between ages one and three. Education is compulsory from age 6 (sometimes 7) to age 16 (or 17 or 18), depending on the state (NCES, 1994: 62; CERI, 1995: 316). The precise structure of primary and secondary education varies between and even within school districts. One typical pattern is an elementary school comprising grades 1-6, followed by a middle school or junior high school comprising grades 7-9, and a (senior) high school comprising grades 9-12 (Münch, 1989: 20-21; NCES, 1994: 62). Grade twelve should ideally be completed by age 18.

Contrary to both Germany and the Netherlands, there is no formal differentiation of schools types, or of tracks within school types, by the level of teaching or the ability level of the pupils. Within schools, pupils are not placed in strict tracks, but explore various courses in both vocational and academic areas of the curriculum. At the secondary level, states require students to take a certain number of courses, as well as certain numbers of courses in specific areas in order to obtain a high school diploma. All states have requirements for mathematics, science and English; most have them also for history and social studies. Schools offer various courses in each of those areas, at both an introductory and advanced level. Thus, American high school students have a great deal of latitude in choosing their own programs. The combination of this latitude and the informal differentiation among courses within each area causes an informal tracking of American high school students. Those who plan to enroll in a four-year college opt for many advanced academic courses, while the non-college bound will choose more vocational and non-advanced academic courses (NCES, 1994: 62-64).

Introductory VET tends to be offered for the first time in grade 7 (NCES, 1994: 62). Occupation-related VET is usually not offered before grade 10. Vocational courses are generally not required for graduation. Still, about 97% of public high school graduates in 1990 completed at least one VET course during their high school career. 28% of them even completed four or more credits[1] in VET. However, only one third of the latter group completed what could be considered a coherent vocational program: four credits in one area, two of which at an advanced level. The number of VET credits earned by high school graduates has declined throughout the eighties, and so has the percentage of advanced-level VET credits among all VET credits earned (NCES, 1994: 65-66).

Three types of high schools can be distinguished in relation to the specific organization of VET (NCES, 1994: 62-63). The typical American public high school is a so-called comprehensive high school. It offers both academic and vocational

courses, but tends to focus on the former (Oakes et al., 1992). Still, the large majority of vocational education in American high schools is offered at this type. Second, there are area vocational schools. These are central facilities that offer (mostly occupation-related) VET for students of two or more high schools. Students attend their home high school for academic courses, and the area vocational school for VET courses. Third, there are full-time vocational high schools. Notwithstanding their name, these too offer a complete program of both academic and vocational courses, just like comprehensive high schools do. The difference is that the full-time vocational high schools have their primary focus on vocational studies. They are often organized around one or a few specific economic sectors.

State legislation in the U.S. also provides for the establishment of private elementary and secondary schools. Private schools may receive some government support but are mostly financially independent (CERI, 1995: 316). Approximately 10% of elementary and secondary students attend private schools (NCES, 1994: 62). Private schools account for a larger share of students at the early grade levels than at grades 10-12 (Münch, 1989: 24). And private high schools covering grades 10-12 tend to be predominantly college-preparatory schools, and thus not very important from a VET perspective.

*Post-secondary education and training*

American post-secondary education shows a large diversity of educational establishments. First, there are four-year colleges and universities that offer four-year undergraduate programs leading to a bachelor's degree. Universities offer additional programs of one or more year(s) that lead to a master's degree. Professional schools also offer such programs. Finally, universities run three- or four-year doctorate programs. All these instutions are the equivalent of the higher vocational colleges and universities in Germany and the Netherlands, and fall outside our definition of markets for intermediate skills.

Second, there are various types of two-year colleges[2]. These may be community colleges, technical colleges or junior colleges. They offer various types of programs. To begin with, they offer parallel programs for the first two years of undergraduate programs. These are usually transferable for credits at a four-year college or university, and thus enable enrollment in the third year of a bachelor's program there. In addition, two-year colleges offer vocational programs that prepare students for the labor market. If these programs last two years and consist of college-level courses, they will lead to an associate degree. If they are not college-level, they can last from a few months up to two years, and lead to a vocational certificate or diploma. In the 1960s, most two-year colleges offered predominantly transfer programs. However, the share of vocational programs in their offerings has increased significantly since (Brint & Karabel, 1991). Both two- and four-year

colleges can be private as well as public.

Third, there are public vocational-technical institutes. These differ from two-year colleges in that they generally do not award associate degrees and concentrate on certificate programs lasting up to one year (NCES, 1994: 63). Fourth, there are various private-for-profit technical and vocational institutions that offer programs ranging from very short (i.e. six weeks) vocational certificate programs to two year associate degree programs. Finally, churches, libraries, business and various community groups offer occupational opportunities for adults (CERI, 1995: 316).

At the post-secondary level, only occupation-specific vocational programs are offered (NCES, 1994: 64). These can be offered by all of the types of educational establishments mentioned above. In 1988-1989, institutions which offered programs that lasted less than two years were responsible for 51% of the vocational certificates and degrees awarded in the U.S., public two-year colleges for 32% and private two-year colleges for 12% (NCES, 1994: 66). Sometimes public and private four-year colleges also offer certificates and associate degrees in vocational areas; together, these account for 6% of the vocational certificates and degrees awarded in 1988-89. Due to the short duration of most programs offered at private institutions which offered programs that lasted less than two years, these do not account for the majority of enrollments in VET. Public two-year colleges accounted for almost half of all enrollments in vocational courses in the fall of 1990 (NCES, 1994: 66). Almost all students at public and private-for-profit vocational-technical institutes, 90% of students at private two-year colleges, and 80% of students at public two-year colleges took VET courses (NCES, 1994: 67).

*Work-based VET*

For the entire U.S., there are approximately 830 so-called 'apprenticeable' occupations (BAT, 1992). But apprenticeship only accounts for a minor part of American VET. In the fiscal year of 1992, there were about 300,000 civilian apprentices, and an additional 64,000 military apprentices (DOL, 1995: 24). 41,000 apprentices completed their training in that year. Contrary to the Netherlands and Germany, apprenticeship is located at the post-secondary level instead of at the upper secondary level. Thus, American apprentices tend to be older than their European counterparts.

Although in general it only plays a minor role, apprenticeship is important in the construction sector. Over half of all registered U.S. apprentices in 1992 were trained in the construction sector (DOL, 1994: 23); so had been 60% of the 38,819 apprentices that completed training in 1988 (DOE, 1993: 3). In addition, the precise importance of apprenticeship in the U.S. differs from state to state, with above average numbers of apprentices in the north central and east south central areas of the U.S. (Gitter, 1994).

Another aspect which differs from state to state is the precise organization

of apprenticeship. At the federal level, apprenticeship is regulated by the 1937 National Apprenticeship Act, also known as the Fitzgerald Act. The Bureau of Apprenticeship and Training (BAT), located in the federal Department of Labor (DOL), is the federal agency responsible for the administration of apprenticeship. In some states, BAT directly supervises apprenticeship; other states have recognized State Apprenticeship Agencies or Councils to do so. Currently, there are 27 States with Apprenticeship Councils (DOL, 1995: 23), and Wisconsin is one of them.

Most training that American firms do offer tends to be relatively firm specific. But the supply of firm-sponsored training is relatively low in the U.S., in particular for frontline workers. Hilton (1991) presents estimates of employer investments in training of $263 per worker per year in the United States, as compared to $633 in Germany. MacDuffie & Kochan (1995) present data that show that American firms in the automobile industry invest less in training than their European competitors do.

### 4.2.2 The state of Wisconsin

The state of Wisconsin lies in the central northern area of the U.S., in what is known as the American Mid-West. It is a small state, with a little over 5 million inhabitants in 1994 (WLRB, 1995: 777). The state capital is Madison, but the largest city, and the state's industrial stronghold, is Milwaukee, with its urbanized area inhabited by over 1.2 million people (WLRB, 1995: 755). Wisconsin traditionally is an industrial state. Although its manufacturing industry was hit by a hard recession in the early 1980s, it still ranked 12th among American states in the value added by manufacturing in 1992, and third in the share of income earned in manufacturing in 1993 (WLRB, 1995: 627; 667). The industry group that accounted for the largest share of that value was industrial machinery and equipment, followed by food and kindred products, and paper and allied products (WLRB, 1995: 628).

Labor force participation rates in Wisconsin are higher than the national averages, both for men (77% vs. 75.2%) and for women (65% vs. 57.9%) (1993 figures; Dresser et al., 1996). Both the unemployment and poverty rates in Wisconsin are below the national average. In 1994, the Wisconsin unemployment rate was 4.5% as compared to a national average of 6.1% (NCEE, 1995: 25); in August 1995, unemployment in Wisconsin even reached a 25 year low at 2.8% (Dresser et al., 1996: 41). The Wisconsin poverty rate was 9.0% in 1994, as compared to a national average of 14.5% (Dresser et al., 1996: 24). The 1993 median household income in Wisconsin ($31,766) was a little over the national average of $31,241; the same goes for the average weakly earnings in manufacturing in the same year (NCEE, 1995: 25). Behind these relatively good statewide medians and averages hide considerable regional and racial differences. For example, the black population falls considerably behind in all such categories (Dresser et al., 1996).

Further, one should note that median household income (measured in 1994 dollars) has been dropping between 1969 and 1994, with 2.6% in Wisconsin and with 5.8% throughout the U.S. (Dresser et al., 1996: 14). The drop in median household incomes coincides with a drop in average hourly wages (in 1994 dollars) over the last decade. Between 1979 and 1993, the average hourly wage for Wisconsin workers dropped by 8.56% from $12.08 to $11.05; nationwide, the drop was only 3.15% over the same period, from $12.41 to $12.02 (Dresser et al., 1996: 30). This drop has occurred for all levels of educational attainment, except for graduates of 4-year colleges (Dresser et al., 1996: 34). Only 14% of the wage drop in Wisconsin can be attributed to shifts in employment between sectors; the rest is attributable to falling wages within industries (Dresser et al., 1996: 45-47). One important dynamic behind this appears to be the relocation of firms away from higher-wage regions to lower-wage ones. Most of this effect appears to come from relocation within the state itself, although many firms have also relocated toward low-wage states in the U.S. or abroad (Dresser et al., 1996, p. 49).

Table 4.1: Educational attainment of persons 25 years old and over, April 1990

| Percentage of population with as highest level of attain-ment: | Less than 9th grade | 9th to 12th grade, no diploma | High school graduate | Some college, no degree | Associate degree | Bachelor's degree or higher |
|---|---|---|---|---|---|---|
| US | 10.4 | 14.4 | 30.0 | 18.7 | 6.2 | 20.3 |
| Wisconsin | 9.5 | 11.9 | 37.1 | 16.7 | 7.1 | 17.7 |

*Source: Snyder & Hoffmann (1995: 4, Table 1)*

Table 4.1 presents an overview of educational attainment in the U.S. and Wisconsin. In 1990, the percentage of Wisconsin's population with at least a high school diploma is, at 78.6%, above the national average of 75.2%. This corresponds to a 21st rank among American states (Snyder & Hoffman, 1995: 2; 4). At the same time, the percentage of the population with some college education or a college degree lies below the national average of 45.2%, at 41.5%. Within the latter group, the percentage of the population in Wisconsin with an associate degree is relatively high: 7.1% as compared to 6.2% nationwide (Snyder & Hoffmann, 1995: 4).

Turning to the production of these credentials, a first important observation is that Wisconsin invests relatively heavily in education. It ranks 8th in per capita state and local direct general expenditures for education in 1991-92, as compared to 14th for total direct per capita expenditures (WLRB, 1995: 654 & 821).

It is important to note that Wisconsin (contrary to the Netherlands or the German states) does not have one Department of Education that governs all public (let alone private) education. Public school-based education in Wisconsin is organized in three different systems, and each system has its own governance structure. The first of these systems is the K-12 system that covers all primary and secondary education (section 4.2.3). The other two systems are concerned with education and training at a post-secondary level. They are the Wisconsin Technical College System (WTCS; section 4.2.4) and the University of Wisconsin System (UW; section 4.2.6). The WTCS offers vocational, associate degree and college parallel programs with a duration of up to two years. The UW offers four-year bachelor programs, as well as subsequent master's and Ph.D. programs.

Public school-based education does not represent the entire range of education and training opportunities available for Wisconsin's population. A first additional option is Wisconsin's apprenticeship system that operates at the crossroads of public and private education (section 4.2.5). Further, there are private schools at both secondary and post-secondary levels (section 4.2.7).
Table 4.2 presents an overview of the relative importance of the various school-based educational systems based on the number of various types of degrees awarded in 1991-92.

Table 4.2: Diplomas and degrees earned in Wisconsin, 1991-92

| School type | Highschool diplomas | Technical college diplomas | College and university diplomas | | | |
|---|---|---|---|---|---|---|
| Degree type | | Associate degree | Bachelor's degree | First professional degree | Masters degree | Doctorate degree |
| Total | 53,573 | 9,622 | 27,542 | 946 | 6,252 | 830 |

*Source: WLRB (1995: 649)*

### 4.2.3 Wisconsin's K-12 system

*Governance and finance*

Article 10 of Wisconsin's constitution provides for the establishment of "district schools, which shall be as nearly uniform as practicable", that should provide free education for all children in the state (WLRB, 1995). The constitution also vests the supervision of public instruction in a State Superintendent of Public Instruction. This State Superintendent is elected for a four-year term on a non-partisan ballot, and heads the Department of Public Instruction (DPI)[3]. DPI is one of only two

Departments that are headed by what is called a constitutional officer (WLRB, 1995).

In Wisconsin, education is compulsory until the age of 18. Pupils have to attend the school in their school district or (if the district has more schools offering the grade concerned) their neighborhood[4]. Wisconsin has 427 school districts[5] that administer the elementary and secondary school programs. This number is considerably down from the 2,731 school districts in 1960 (WRLB, 1995: 641). The average size of a Wisconsin school district (fewer than 2,000 students) is very small; only fifteen states show a smaller average size (Snyder & Hoffman, 1995: 23). Within Wisconsin, the size of school districts varied considerably[6]. 88 school districts had less than 500 pupils in 1994-95, whereas 10 had over 10,000 (WLRB, 1995: 650). These districts together operated 2,030 schools in 1992-93, with an average school size of 410 pupils (Snyder & Hoffman, 1995: 76). Secondary schools tend to be a little larger than elementary schools.

The most important income of school districts does not come from the state government, but from a property tax that they themselves are authorized to levy. Thus, they are fiscally independent. Income from these local property taxes generated 53.3% of the income for K-12 school districts in 1993-94 (Toulmin & Bukolt, 1995: 3). In addition to this tax, school districts receive subsidies from the state that account for 39.0% of their income. State subsidies come in two ways. First, unrestricted general aid is awarded according to a 'general equalization' formula that compensates poorer school districts for their weaker fiscal capacity (Toulmin & Bukolt, 1995: 1)[7]. Second, the state provides a number of types of categorical aid to partially fund costs of certain specific programs. The various types of categorical aid accounted for 15.0% of all state aid in 1994-1995 (Toulmin, 1995: 37). Taken together, all sources of income put Wisconsin school districts in a relatively affluent position. Wisconsin ranks 9th where it comes to a small pupil/teacher ratio, and 11th in current expenditures per pupil in average daily attendance (Snyder & Hoffman, 1995: 18 & 88).

The autonomy of school districts is of course not unlimited. In Wisconsin, twenty standards define the essential state rules that govern school districts (Bukolt & Toulmin, 1995). But there are more statutory requirements that school districts have to comply with[8]. One of the areas where state standards apply is high school graduation. Since September 1988, school boards have only been allowed to grant a high school diploma to students that have completed at least 4 credits of English, 3 of social studies, 2 of mathematics, 2 of science and 1.5 of physical education in the high school grades, as well as 0.5 credit of health education in grades 7 to 12 (Wisconsin Statutes, section 118.33; Bethke, 1990: 84). In addition, school districts are encouraged to require an additional 8.5 credits of electives, which may be in VET as well as in academic areas (DPI, 1995b: 28). School districts do need approval from the State Superintendent of Public Instruction for their specific

graduation requirements (Wisconsin Statutes sections 118.33; Bukolt & Toulmin, 1995: 11). The number of credits that individual school districts actually require for graduation ranges from 20 to 29.5 (DPI, 1995b: 29).

The typical public school structure in Wisconsin comprises an elementary school that covers grades K-5, followed by a middle school covering grades 6-8, and a high school covering grades 9-12. The most important alternative is a junior high school, which replaces the middle school. A junior high school offers grades 7-9, which means that grade 6 is added to the elementary school and grade 9 taken out of the (senior) high school. In 1993-1994, Wisconsin had 431 high schools, 263 middle schools and 81 junior high schools. Nearly all high schools in Wisconsin are comprehensive high schools, meaning they offer both academic and vocational courses. There is one vocational high school in Milwaukee, but this also offers academic courses and thus enables its graduates to meet college entry requirements. The largest Wisconsin high school had 1,982, students; the smallest had 565 (DPI, 1995b: 18).

*VET in secondary schools*

The first instance of manual training and general shop courses in Wisconsin public high schools was found in Eau Claire in 1884 (Paris, 1985). In 1895, the Legislature passed a law that encouraged such manual training in high schools. Today, vocational skills are one of the educational goals contained in section 118.01 of the Wisconsin Statutes (Bethke, 1990: 82). According to this section:

> "Each school board shall provide an instructional program designed to give pupils:
> 1. An understanding of the range and nature of available occupations and the required skills and abilities.
> 2. Preparations to compete for entry-level jobs not requiring post secondary school education.
> 3. Preparation to enter job-specific vocational training programs.
> 4. Positive work attitudes and habits."

Accordingly, section 121.02 of the Wisconsin Statutes requires school districts to provide pupils with an introduction to career exploration and planning in grades 5 through 8, and opportunities to study VET in grades 9 through 12 (Bethke, 1990: 85-86). The same section requires school districts to have an 'education for employment' program that has been approved by the State Superintendent (DPI, 1995b: 14).

But vocational education is not part of the state minimum requirements for high

school graduation. Of the 380 regular school districts with high schools, only 61 have themselves set graduation requirements in vocational education (DPI, 1995b: 29; 402-412). And only 8 of them require at least one credit of vocational education. As with all courses, school districts are free to develop their own vocational education curriculum.

*Performance indications*

There are indications that Wisconsin's K-12 system functions better than the American average. To begin with, drop out rates in Wisconsin are below the national average. In 1991, the state ranked only 33rd among American states. 7.1% of the Wisconsin population aged 16-19 is not in school and has no high school diploma or General Equivalency Diploma (GED), as compared to a national average of 11.7% (NCEE, 1995: 48; Snyder & Hoffman, 1995: 6). Wisconsin primary and secondary students also do well in academic tests. Among American states and in the year 1992, Wisconsin ranks (Snyder & Hoffman, 1995: 14 & 46-48):

- 4th in average proficiency in mathematics of 4th graders in public schools;
- 6th in average proficiency in mathematics of 8th graders;
- 6th in average reading proficiency of 4th graders.

In addition, both the average Wisconsin 8th and 10th grade student rank in the 73$^{rd}$ percentile nationally for a battery of multiple choice questions in language arts, reading, mathematics, science and social studies in 1993-94 (Bukolt, 1995b: 6). Their performance in writing exercises is not as good, though: it varies around the 50th percentile rank. Finally, those Wisconsin 12th grade students that participated in the enhanced American College Test (ACT) scored a statewide average of 21.8, which is exactly one point above the national average (DPI, 1995b: 7).

School performance does differ tremendously between individual schools and school districts. Particularly alarming is the performance of the state's largest public school district, Milwaukee. While accounting for 11.4% of all public school enrollments in 1992-93 (Snyder & Hoffman, 1995: 75), it accounts for 46% of high school drop outs and 47% of all habitual truants in the state (DPI, 1995b: 23-24). The average student score on multiple choice questions in language arts, reading, mathematics, science and social studies for Milwaukee ranks in the 38th percentile for 8th graders and in the 41st percentile for 10th graders, as compared to a state average ranking of 73rd nationwide for both groups (Bucholt, 1995b: 21; 34). Typical inner city problems are part of the explanation.

### 4.2.4 The Wisconsin Technical College System

*Governance and finance*

The origins of what today is called the Wisconsin Technical College System (WTCS)[9] lie in 1911. A new law from that year established continuation schools to provide part-time education for youth and adults who were not enrolled in either secondary or post-secondary schools (Paris, 1985; Bukolt, 1995a). However, some areas of the state still lacked vocational schools in 1965. Hence, a new law demanded that the entire state be divided in technical college districts, and laid the basis for today's system (WLRB, 1995).

Today's system consists of 16 technical colleges in 16 technical college districts. Most districts operate several campuses and/or regional centers (WTCS, 1995a; 1995b). Each district is supervised by a nine member district board, consisting of two employers, two employees, three public members, a school district administrator and an elected official at state or local level (Bukolt, 1995a: 2-3). Local committees consisting of county board chairs or school board presidents appoint the district board members.

These individual district boards share responsibility for the governance of the system with a statewide Wisconsin Technical College System Board that has to ensure statewide consistency in the system[10]. The word 'share' indicates that the type of governance of the state board towards individual colleges should be described as associational, rather than hierarchical. The WTCS Board consist of 13 members: one employer representative, one employee representative, one farmer representative, three ex-officio members (the State Superintendent of Public Instruction, the Secretary of Industry, Labor and Human Relations, and the President of the University of Wisconsin Board of Regents), six public members and one student. All but the three ex-officio members are appointed by the Governor. The Board commands an administrative staff that is headed by a State Director, appointed by the Board (Bukolt, 1995a: 1).

Wisconsin invests heavily in its two-year colleges. It ranks 20th in expenditures for public four-year institutions of higher education, but 6th in expenditures for public two-year institutions (Snyder & Hoffman, 1995: 108; 110). And it ranks first when it comes to the number of FTE students per faculty member (ibid: 175).

Just like the public school districts in the K-12 system, the technical college districts are fiscally independent. They receive the largest part of their revenue from property taxes they levy themselves. These property taxes account for around 45% of revenue. There is a maximum tax rate for operational costs, and 6 districts were at that maximum rate in 1994-95 (Bukolt, 1995a: 7-9)[11]. The second most important source of revenue for the technical colleges is state aid. Since 1980, state aid has accounted for approximately 19% of total revenue (Bauer, 1991: 17; Bukolt,

1995a: 10). Almost 90% of state aid is general aid, which is distributed through a cost-sharing formula which is designed to partially equalize the fiscal capacities of the 16 districts (Bukolt, 1995a: 11). The remainder comes from various types of categorical aid for specific purposes. Over the last decade, the share of categorical aid in total state aid has grown from less than 1% to 11% (Bukolt, 1995a: 12). The largest type of categorical aid is the incentive grants program. This program enables the WTCS Board to award grants to districts for basic skills programs, programs for emerging occupations, programs for technology transfer, or to districts with a declining fiscal capacity (Bukolt, 1995a: 12-13). Third, tuition and student fees accounted for another 13% of WTCS revenue in 1993-94 (Bukolt, 1995a: 7). The law requires the WTCS to set tuition for state residents[12] in vocational certificate and associate degree programs at a level that generates at least 14% of their statewide operational costs (Bukolt, 1995a: 15-16). Tuition for college parallel programs should equal at least 31% of statewide operational costs. In 1994-95, tuition for state residents in associate degree and vocational programs was $46.10 per credit, which amounts to approximately $1,383.00 a year. Wisconsin ranked relatively high (15th) among American states in the cost for public two-year colleges (Philippe, 1995: 49). Besides tuition, students have to pay a materials fee that ranges from $3 to $30 per credit (Bauer, 1991: 52). This may significantly raise the total costs of education and training. It should be noted, though, that students can apply for various scholarships and grants from the federal or state government. Fourth, federal subsidies account for an additional 9.7% of WTCS revenue (Bukolt, 1995: 17). 74% of these funds is distributed by the districts as financial aid to students. Fifth and last, the remaining 13.2% of total WTCS revenue comes from self-financing operations, equipment sales, interest and the provision of educational services to companies and other organizations on a contract basis (Bukolt, 1995a: 17).

*VET and other programs*

The core tasks of the WTCS are to provide occupational education and training, as well as customized training and technical assistance to business (Bukolt, 1995a: 3). In addition, it is to provide courses for high school students through contracts with secondary schools, a college parallel program, non-vocational or self-enrichment courses, basic skills education, and education and services to minorities, women, and the handicapped or disadvantaged. The programs are divided in two main categories: post-secondary education and continuing education (Bukolt, 1995a: 3-4; WTCS, 1995a: 5).

Post-secondary programs are offered full-time, but many students enroll in them on a part-time basis. They come in three types:

- *college parallel* programs that provide the first two years of a baccalaureate program. These are offered in three districts only;

- *associate degree* programs, which are two-year post-high school occupational programs that teach future technicians at the mid-management level the manipulative and theoretical understandings, which allow them to operate effectively. They have to meet specific requirements. They consist of 64 to 72 credits. Of those, 15 are required general education credits that are the same for most programs. In principle, these 15 credits can be transferred to a four-year college. At least 32 credits are occupation-specific courses, and an additional 11-19 are occupational supportive courses. Finally there are 6 elective credits;
- *vocational diploma* programs (now called *technical diploma* programs), which are short-term, one- or two-year programs that prepare students for work in semi-skilled or skilled crafts. They offer hands-on learning of occupational skills in laboratories or shops, in connection with related classroom instruction. Their length ranges from 2 to 70 credits. They do not need to (but may) contain general education credits. The majority of credits will be occupation-specific. In this category are also included apprenticeship programs, for which the technical colleges typically provide the related instruction; these will be separately discussed in section 4.2.5.

The other main category, continuing education, consists of part-time vocational-adult programs and of district/community services, such as driver education, adult high school courses, and non-vocational courses (Bauer, 1991: 6-7; Bukolt, 1995a: 3-4).

Some technical diploma and associate degree programs have a work-based component in the form of cooperative education or an internship. Many, but not all of these, entail pay. At one college, work-based learning is a required element in 19 program areas, and optional in another 23 (Milwaukee Area Technical College, 1995: 33). Together, these areas cover roughly a fifth of all program areas.

*Enrollment*

Tables 4.3 and 4.4 present overviews of headcount and FTE enrollment in various types of WTCS programs. Total statewide headcount enrollment is approximately 7 times higher than the total FTE enrollment (Bukolt, 1995a: 6). The technical colleges serve many people: 1993-94 headcount enrollment accounts for 11.7% of the estimated adult population in 1994 (our own calculations, based on WTCS, 1995b: 1 & WLRB, 1995: 783). But most people take only one or a few courses. Vocational-adult programs account for the majority of headcount enrollments, but (short as they are) only account for 9.1% of FTE enrollments in 1994-95 (WTCS, unpublished statistics). The opposite is true for associate degree programs: these account for only 19.9% of total headcount enrollments in 1994-95, but for over half of FTE enrollments.

Table 4.3: Headcount enrollment in Wisconsin Technical College System, 1985-86 and 1994-95

| | Total[1] | Postsecondary education | | | Continuing education | |
|---|---|---|---|---|---|---|
| | | College parallel | Associate de | Vocational | Vocational ad | Community |
| 1985-86 | 439,974 | 8,330 (1.7%) | 77,427 (15.4%) | 69,127 (13.7%) | 251,132 (49.9%) | 96,991 (19.3%) |
| 1994-95 | 434,780 | 13,630 (2.8%) | 97,023 (19.9%) | 99,313 (20.3%) | 258,024 (52.9%) | 20,214 (4.1%) |

*Sources: WTCS (1995b: 1) and WTCS unpublished statistics.*

Table 4.4: FTE enrollment[2] in Wisconsin Technical College System, 1985-86 and 1994-95

| | Total | Postsecondary education | | | Continuing education | |
|---|---|---|---|---|---|---|
| | | College parallel | Associate degree | Vocational | Vocational adult | Community |
| 1985-86 | 57,935 (100%) | 2,129 (3.7%) | 31,009 (53.5%) | 16,279 (28.1%) | 6,746 (11.6%) | 1,772 (3.1%) |
| 1994-95 | 59,156 (100%) | 4,311 (7.3%) | 32,009 (54.1%) | 16,997 (28.7%) | 5,366 (9.1%) | 473 (0.8%) |

*Sources: WTCS (1995b: 2) and WTCS unpublished statistics*

FTE enrollment in the WTCS has been fluctuating around 60,000 since 1981 (Bauer, 1991: 10; Bukolt, 1995a: 6). FTE enrollment in college parallel programs has doubled over that period; that in associate degree and vocational diploma programs has slightly increased; that in vocational-adult programs has decreased a little; and that in community service programs has decreased significantly, but only in 1994-95 (WTCS, 1995b: 2; WTCS, unpublished statistics).

[1]Students enrolled in more than one type of program are counted only once in the total, which is why the numbers don't add up to the total.
[2]30 credits per year is considered one FTE student (WTCS, 1995b, p.2).

Table 4.5: Mean, median and modal ages of students in various types of WTCS programs, 1994-95

| Age | Postsecondary education | | | | Continuing education | | | All |
|---|---|---|---|---|---|---|---|---|
| | College parallel | Assoc. degree | Vocational | All post sec. | Voc. adult | Comm. serv. | All contin. | |
| Mean | 25.9 | 31.3 | 28.5 | 29.9 | 36.9 | 45.4 | 37.4 | 34.6 |
| Median | 23.0 | 30.0 | 26.0 | 28.0 | 36.0 | 44.0 | 36.0 | 33.0 |
| Modal | 19.0 | 19.0 | 18.0 | 19.0 | 34.0 | 39.0 | 34.0 | 19.0 |

*Source: WTCS, unpublished statistics*

The students enrolled in Wisconsin's technical colleges are relatively old as compared with Dutch and German upper secondary education students. In 1991, only 11% of students leaving high school directly entered the WTCS (WTCS, 1994). Thus, most WTCS students are adults that return to school. Table 4.5 presents mean, median and modal ages for students enrolled in various types of programs. Note that these are the ages based on headcount enrollment, and that correcting for FTE enrollment results in lower mean and median ages. For instance, the median age for all students then drops from 33 to 24, and that for all post-secondary students from 28 to 24 (WTCS, unpublished statistics).

In 1994-95, 60,009 students (13.8% of headcount enrollment) had not completed 12th grade in high school (WTCS, unpublished statistics). This percentage is highest (31.2%) for students enrolled in post-secondary vocational programs. On the other hand, 46,489 students (10.7% of total enrollment) had completed 16 grades, which amounts to finishing a four-year college education (WTCS, unpublished statistics). This percentage is highest among students enrolled in cooperative services (24.3%) and vocational-adult programs (12.6%).

Individual technical colleges differ in a number of ways. The largest technical college enrolled 64,946 persons in 1993-94, which is 22.3% of total FTE enrollment in the state. The smallest enrolled only 9,258 persons and 1.9% of state FTE enrollment (Bukolt, 1995a: 6). Colleges also differ in the share of part-time enrollments. One college enrolled 4.8 persons per FTE, another 10.2 (Bukolt, 1995a: 6). And colleges differ in the importance of various types of programs. Continuing education programs account for 5.1% of FTE enrollments at one college, but for 19.4% at another (Bukolt, 1995a: 5). One reason for such differences between individual colleges is differences in their policies. Since the largest part of their funds is generated through local taxes, individual colleges have a great deal of autonomy.

*Performance indications*

The internal efficiency of the WTCS is relatively low: few students that enroll in its programs actually graduate. Even when compared to FTE enrollment figures, the number of students that actually finishes a complete program is low (Table 4.6). For short-term (less than one-year) vocational programs, headcount enrollment is the proper measure. 14,722 enrolled persons correspond to only 4,562 graduates. Together, all programs offered by the WTCS produce only 16,107 graduates in 1994-95, 548 of which are apprentices to be discussed in the next section (WTCS, unpublished statistics). The high non-graduation rate is, however, not seen as a major problem in Wisconsin. If a few courses suffice to help somebody get a (better) job, student participation has already paid off. In fact, many students are said to enroll with the sole intention of taking only a few specific courses.

Table 4.6: FTE enrollment and number of graduates in various types of WTCS programs, 1994-1995

| | College parallel programs | Associate degree programs | Two-year vocational diploma programs | One-year vocational diploma programs |
|---|---|---|---|---|
| FTE enrollment | 4,311 | 32,009 | 1,783 | 5,425 |
| graduates | 137 | 7,412 | 543 | 2,987 |

*Source: WTCS, unpublished statistics.*

The external efficiency of the WTCS depends on the success of its former students in the labor market. We can catch a glimpse of their careers from the system's five year longitudinal graduate follow-up studies (WTCS, 1996). We should, however, be cautious when interpreting their findings: these studies are limited to graduates, based on an imperfect sampling method, and response rates vary significantly between districts, while averaging a mere 48% (WTCS, 1996: 1). Of the 1989-90 graduates responding, 72% were still employed in jobs related to the training they received (WTCS, 1996: 2). This is approximately the same percentage as for 1993-94 graduates six months after graduation (WTCS, 1995d: 4). Of those that were employed in other fields than they were trained in, 21% gave higher earnings as a reason for the switch, 19% their working pleasure, 16% not wanting to relocate in order to obtain training-related employment, and 10% upward mobility within their firm (WTCS, 1996: 7). Of the responding graduates that were employed, 79% of the 1993-94 generation were employed in the same college district where they were trained after six months, and the same was true for 68% from the 1989-90

generation of graduates after five years (WTCS, 1995d: 5; WTCS, 1996: 3). Only 7% of the latter were working out of state.

We don't have accurate data for the wage premium that various technical college programs result in for their graduates. For those who have taken 1-3 years of post high-school education (a group that includes drop outs from four-year colleges), the premium on training seems small: for Wisconsin men, the average hourly wage lies only $0.50 higher than that for high school graduates, and only $0,80 for women (Dresser et al., 1996: 34). While the wage premium for this group is also low in the rest of the country, Wisconsin average hourly wages for them lie below the national averages, and the wage difference with high school graduates is also smaller than the national average.

The five year follow up of 1989-90 graduates from the WTCS (with all its limitations) gives a more detailed picture of wages earned by graduates from various WTCS programs five years after graduation (Table 4.7). Two-year diploma programs seem an attractive option in Wisconsin, given the high median salary level among its graduates. The most remarkable finding is that among graduates from the industrial division, those from short-term vocational programs have the highest median salary. The most likely explanation for this is that graduates from the latter are relatively older and had already been employed in attractive jobs prior to their enrollment, as compared to graduates from longer programs. This explanation is underlined by the finding that among 1993-94 graduates, those from short-term industrial programs already earn more within six months from graduation (WTCS, 1995d: 16-17). For the 1985-86 generation, after five years graduates from short-term programs earned less than those from two-year programs when we control for hours worked, but still a little more than those from one-year vocational programs (Wisconsin Board of Vocational, Technical and Adult Education, 1992: 10). The relatively low median salary for graduates from industrial associate degrees is based on a small number of graduates/respondents. Remarkable is the relatively low median wage for graduates from college parallel programs; among the 1985-86 generation of graduates, they topped all other graduate categories in median monthly salary (Wisconsin Board of Vocational, Technical and Adult Education, 1992: 11). For these programs, however, the number of respondents is also relatively low.

Table 4.7: Median monthly salary in 1995 of 1989-1990 graduates from various types of WTCS programs, for the industrial division and across all divisions

| | Associate degree | College parallel | Two-year diploma | One-year Diploma | Short-term diploma | Total |
|---|---|---|---|---|---|---|
| All divisions | $2,291 | $1,972 | $2,208 | $1,777 | $1,560 | $2,083 |
| Industrial division | $1,830 | | $2,317 | $2,258 | $2,557 | $2,383 |

*Source: WTCS (1996: 9-10)*

Thus, the information on the performance of the WTCS is mixed. On the one hand, the number of people (and firms) it attracts as customers is admirable. In particular, the WTCS is quite successful in attracting adults. But it is less successful in attracting high school graduates directly when they leave high school. Further, most WTCS students merely attend a few courses rather than complete an entire, rigorous training program. And graduates of WTCS programs do not appear to experience the significant wage benefits in the labor market one would expect. We will elaborate on the merits of the WTCS in the American context in section 4.4.

### 4.2.5 Wisconsin's apprenticeship system

*Governance*[13]

Wisconsin had a state apprenticeship law as early as 1849. In 1909, the Wisconsin Legislature formed a Commission on Industrial and Agricultural Training (Paris, 1985). Its most prominent member, Charles McCarthy, traveled to the American East Coast and to Europe, where he found inspiration for a new training system in Germany. He realized that Wisconsin had a very high proportion of German immigrants that would probably respond favorably to the German example. Based on the Commission's report, the Wisconsin Legislature passed the first comprehensive continuation school legislation in the U.S. in 1911. It provided for continuation, trade and evening schools as the Commission had proposed them (Paris, 1985; Münch, 1989). These schools should provide education for 14-16 year old boys and girls who had quit high school, and for adults. In addition, they should provide related instruction for apprentices (Paris, 1985). In the same year, the Wisconsin Legislature issued a new apprenticeship law (Wisconsin Statutes, Chapter 106) that regulated the work-based component of apprenticeship training: The Comprehensive Apprenticeship Law (Münch, 1989).

Today, Wisconsin's apprenticeship system is still governed by that same

apprenticeship law from 1911, and by the Apprenticeship Rules (part of the Wisconsin Administrative Code) that interpret it (BAS, 1987). Wisconsin therefore is a State with an Apprenticeship Council that governs its own apprenticeship system (cf. section 4.2.1). Apprenticeship is administrated by the Bureau of Apprenticeship Standards (BAS). BAS is located in the Department of Industry, Labor and Human Relations (DILHR), and is very small: in 1993, it had a staff of only 15.5 FTE and a budget of $750,205 (Vaughan, 1994). BAS is advised by the Wisconsin Apprenticeship Council (WLRB, 1995). The Council has sixteen members, with one half representing employers and the other half representing labor. Members are proposed by statewide trade associations, employer groups and state labor organizations, and appointed by the Labor and Industry Review Commission, a three-person quasi-judicial body appointed by the Governor with Senate consent (DILHR, 1987; WLRB, 1995).

Apprenticeship training is limited to trades and occupations that BAS has approved as apprenticeable (BAS, 1987; Wisconsin Administrative Code Ind. 95.15). There were approximately 300 apprenticeable occupations in Wisconsin, but in only 69 of them were there any apprentices active in 1990 (BAS, 1992). The 300 apprenticeable trades in Wisconsin cover a much smaller share of the labor market than the apprenticeship occupations in Germany. For instance, there is no apprenticeable trade in the area of banking and insurance. The scope of the apprenticeship governance regime has been limited towards the more traditional occupations in construction, industry and personal services. More recent and growing employment sectors have generally not been incorporated.

The Wisconsin Apprenticeship Law requires that there must be a written agreement (an indenture) between the apprentice (and, if under 18, a parent or guardian) and the sponsor of the program (Wisconsin Statutes section 106.01.2). As in Germany, the Wisconsin apprenticeship law has provisions that require everybody in an apprenticeship-type situation to be 'indentured' except for short-term training situations of less than one year (Wisconsin Statutes sections 106.01.1 through 3). It even gives DILHR the task to make sure the provision is upheld (Wisconsin Statutes sections 106.01.9). But it does not forbid training in other than the recognized trades, such as the German law does for those under 18.

Every indenture must be filed with DILHR, and must contain an approved 'Exhibit A' with at least seven provisions (BAS, 1987; Wisconsin Statutes section 106.01.5.; Apprenticeship Rules Ind. 95.07):

- the duration of the apprenticeship. Duration differs per occupation (or, as they are called in Wisconsin, trade). Barbering requires only a minimum of 4,000 hours (two years), whereas tool and die making requires no less than 10,400 hours (approximately five years). Most trades require three to four years of training (BAS, 1992);
- length of the probationary period (with a maximum of six months);

- related instruction. This school-based component is considerably smaller than that in the Netherlands or Germany. Apprenticeship programs consist for 90% of on-the-job training in firms (BAS, 1987). Apprentices have to spend a minimum of 400 hours in related instruction when the term of an apprenticeship is more than two years; else, the minimum is 144 hours a year (BAS, 1987; Wisconsin Statutes section 106.01.5.). Related instruction is typically provided by the technical colleges[14]. These, however, do not have a complete monopoly on the provision of related instruction. Some trades have their own facilities that provide related instruction. Examples are plumbers and carpenters, who have their own related instruction facilities in Milwaukee. But these are exceptions, and concern only a small minority (about 2%) of Wisconsin apprentices (BAS, 1987);
- a schedule of processes to be worked. This outlines the basic phases or facets of the trade and the approximate time the apprentice will spend on each. In the construction sector, state Joint Apprenticeship Committees (JACs), consisting of an equal number of employers and employee representatives have traditionally issued statewide minima for these (cf. section 4.5.3). Outside construction, statewide minimum requirements have been lacking, and the schedules thus are firm specific. There is no final examination: graduation is based upon the satisfactory completion of the related instruction (as decided by the technical college) and the minimum on the job work processes (as decided by the sponsor).
- the apprentice's wage. The state demands that there is a progressive schedule for wage increases over the term of the apprenticeship, that should average at least 60% of the journeyman rate in that trade and area (Wisconsin Administrative Code Ind. 95.04). At the same time no apprentice can be paid less than the state or federal minimum wage. This makes apprentices relatively more expensive than in Germany (cf. section 3.5.4). Furthermore, Wisconsin is the only American state that requires employers to also pay apprentices for the legally required minimum time to be spent in related instruction (DILHR, 1992; Wisconsin Statutes section 106.01.6.);
- special provisions. One example is additional non-paid school hours that sponsor and apprentice may have agreed upon on top of the required minimum of related instruction. Other examples are tool purchases on the part of either party, and bonuses for apprentices upon successful completion of the apprenticeship;
- credit provisions that shorten the period of training when an apprentice has acquired prior relevant training or experience.

Outside the construction sector, apprenticeship programs in Wisconsin are individual programs, which means that the sponsor is an individual plant or firm (BAS, 1987; 1992). Within the company or plant, there may be an in-plant labor-management committee that governs the program. Most firms that have more than two or three apprentices use such a committee. BAS provides firms with technical assistance when they start or modify an apprenticeship program, and firms have to allow BAS to monitor the program. In theory each program should be reviewed each year (BAS, 1987), but in practice monitoring is less frequent due to a lack of staff.

In the construction sector, the sponsor of apprenticeship programs is not an individual firm but a so-called area Joint Apprenticeship Committee (area JAC). Such committees have existed since 1918, and by the late thirties they operated to a large extent in the same way they do today (BAS, 1987). Area JACs consist of an equal number of skilled workers and employers. They select applicants for apprenticeship and indenture them. Subsequently, they must assign the indenture to an individual area employer (Wisconsin Statutes section 106.01.(5i) (a); BAS, 1987). Area JACs monitor the training by employers, and also serve as an advisory board to the local technical college, that provides related instruction for apprenticeship. Throughout Wisconsin and across all different trades in the building sector, there are approximately 100 area JACs. Formally they are merely advisory bodies to BAS, since the law does not give them any authority nor can BAS legally delegate such authority, but in practice they are the ones monitoring training in firms (BAS, 1987)[15].

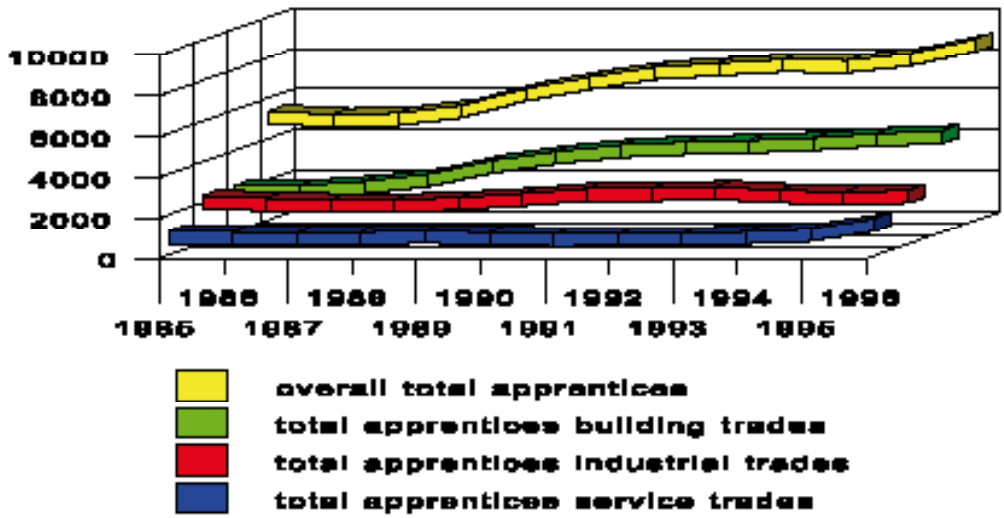
Individuals can be indentured once they are 16 (Wisconsin Statutes section 106.01.1). However, when they are still high school students (age 16-18) they have to have a statement from the school that participating in apprenticeship will not aversely affect their graduation from high school, and maintain their status as a high school student until graduation (BAS, 1987). Provided a student is on track for high school graduation, he/she can enter apprenticeship at age 16. But the typical U.S. apprentice is at least 20 years of age (Gitter, 1994), and Wisconsin seems to fit this picture: an apprentice in the building trades is typically in his mid-twenties, and apprentices in industry even tend to be a little older. Specific trades may have academic entry requirements; if they do, they typically require a high school diploma or a GED.

*Enrollments*

The size of the Wisconsin apprenticeship system is much smaller than that in Germany or the Netherlands. The number of apprentices has grown from 5,039 in January 1985 to 8,598 in January 1996 (BAS statistics). Contrary to other American states, where there are many unregistered apprentices, the apprentice count in Wisconsin is considered reliable since apprenticeship registration is legally required

in Wisconsin. There are trades that may have only one apprentice, such as auto body repair and boilermaker; the largest trade is electrician, with about 700 apprentices. Over half of the apprentices are trained in the building trades (figure 4.1).

Figure 4.1: Apprenticeship enrollments in Wisconsin, 1986-1996




*Source: BAS statistics*

The number of apprentices would be even smaller if not for certain special legislation. A significant number of Wisconsin apprentices is trained in (mostly building) trades where binding rules require workers to obtain some sort of a license in order to be allowed to work in them. The (quantitatively) most important construction apprenticeship trades in Wisconsin are electricians (738 apprentices in 1992), plumbing (627 apprentices) and carpentry (622 apprentices) (BAS, 1992). For carpenters, the Carpentry Law explicitly directs that anyone who is employed to learn to be a carpenter must be indentured (BAS, 1987). However, for those who can show experience and pay the union a fee, it is possible to get a journeyman carpenter card without finishing an apprenticeship, if there is a shortage of carpenters. Plumbing is one of five trades[16] for which there are state licensing laws. These require an apprentice to be indentured prior to employment and the apprenticeship to be completed, before the apprentice may take the licensing examination, which he needs to pass before being allowed to work in the trade. And for electricians, many communities have passed local ordinances that require workers to show evidence of either being an apprentice or having completed an apprenticeship in order to be employed in certain jobs. Such ordinances are fairly common throughout Wisconsin (BAS, 1987). Together, the seven trades where apprenticeship is in some way legally enforced account for approximately 36% of

Wisconsin apprentices in July 1990 (own calculations based on BAS, 1992).

Another form of state labor market regulation that helps to explain the relatively large number of apprentices in the building trades is the 1931 Davis-Bacon Act. This act applies to government building contracts. Workers on those contracts have to be paid the so-called prevailing (journeyman) wage rate in the area, unless they are apprentices. Most of the government-sponsored contracts fall in the category of commercial building, and there the rate of apprentices to journeymen is apparently higher than in home building.

Together, these two types of state regulation help account for the relatively large number of apprentices in the building trades. An additional explanation lies in the fact that the building trades have training funds that pay for apprenticeship training. Other sectors lack such funds. Given the relatively low number of apprentices outside the building trades, the hypothesis seems justified that at this point in time only quite rigid institutional mechanisms succeed in getting a significant number of American firms in a sector to embark on apprenticeship training.

### 4.2.6 The University of Wisconsin System

The State of Wisconsin finances one university system: the University of Wisconsin System (UW). The UW has 26 campuses throughout Wisconsin. Two of these (Madison and Milwaukee) offer programs leading to bachelor's and doctoral degrees. Eleven others provide merely four-year programs leading to a bachelor's degree. And the remaining thirteen institutions are so-called UW Center campuses. These provide two-year courses of study that equal the first two years of a bachelor's program, and allow a subsequent transfer to a four-year campus. They themselves lead to an associate of arts and science degree (UW, 1995a). In September 1994, the UW enrolled 152,281 students (WLRB, 1995: 642).

Admission policies are developed by the individual campuses of the UW. General admission requirements for the UW are a high school diploma or its equivalent and 17 high school credits: 4 in English, 3 in mathematics, 3 in social science, 3 in natural science, and 4 elective credits (Suchman, 1995: 12). Only a few campuses accept vocational courses for some of the elective credits. Further, all applicants must submit their ACT scores. The UW admits all Wisconsin high school graduates that rank in the top 25% of their class, if they apply for UW admission directly upon high school graduation. Irrespective of class rank, a high ACT score can lead to direct admission to most campuses. And if both class rank and ACT score fall short of the requirements, their composite score can sometimes still be enough to qualify for admission.

There are significant differences in admission requirements between the campuses. The UW Centers admit students if they were merely in the top 75% of their class. Most four year campuses require a high school rank in the top 50% to

35%, although some of them in practice enroll significant numbers of students from the lowest 50% of their class (Suchman, 1995: 14). The UW top campus in Madison simply admits the best students as space permits (ibid: 13). 36% of its admitted freshmen ranked in the top 10% of their class, 80% in the top 25%, and 99% in the top 50% (Suchman, 1995: 16).

The access rate of Wisconsin high school graduates who immediately enter the UW has risen from 24.5% in the late seventies to 32.1% in 1993 (Suchman, 1995: 1; 7). Not all new students arriving at the UW in a given year are freshmen; some are transfer students from other colleges. In 1994-95, 13% of transfer students (1,681) came from Wisconsin's technical colleges, most from the three technical colleges with college parallel programs (Rhodes, 1995). However, more students travel in the opposite direction: 2,678 students transferred from the UW to the WTCS degree, diploma or certificate programs in the same year.

The percentage of the population over 25 with a bachelor's or advanced degree in Wisconsin (1990: 17.7%) lies below the national average (20.3%), meaning that Wisconsin ranks 34th among American states in college attainment (NCEE, 1995: 25; Dresser et al., 1996: 10). This group of four-year college graduates receives a substantial wage premium. Male college graduates in Wisconsin earn $6.6 an hour more than those with 1-3 years of post high school education, and female college graduates earn $ 4.85 more (Dresser et al., 1996: 34). The difference between both groups has grown considerably since 1979. Thus, it really pays to graduate from a four-year college, and most youngsters hope one day to achieve this.

### 4.2.7 Private school-based education and training

Section 4.2.1 stated that private educational establishments play a role at every level of education in the U.S.. At the primary and secondary level, enrollment in public schools in Wisconsin corresponds to 85.5% of the 5-17 year old population in 1992 (Snyder & Hoffman, 1995: 28). Only one other state has a lower percentage. The explanation lies in the relatively high enrollment in private schools in Wisconsin, which in 1991-1992 corresponded to 15.1% of the age group as compared to a national average of 10.5%. Thus, Wisconsin ranks 7th among American states in private school enrollment (Snyder & Hoffman, 1995: 30). In 1994-95, there were 961 private elementary and secondary schools in Wisconsin, 74 of which were high schools and 130 combination schools (DPI, 1995c). Since private high schools tend to be college-prep, they contribute little to VET in Wisconsin.

This is different at the post-secondary level. Private-for-profit less-than-four year (or: proprietary) schools and colleges are predominantly vocational in what they offer. In Wisconsin, they are overseen by an Educational Approval Board (EAB) (EAB, 1995). Wisconsin private post-secondary schools and colleges have to obtain a license from the EAB, which they have to renew each year. There

were 81 proprietary institutions that had an EAB license in 1995. They enrolled approximately 15,000 people (half of which graduated) in 1994-95 (EAB, 1995: 5). Proprietary institutions serve a relatively *dis*advantaged, older population and are a sort of last-chance training system for individuals who need a quick fix in skills or weren't admitted to technical college programs (EAB, 1995). To make the fix quick, proprietary schools tend to cut as much as possible on the general curriculum that the technical colleges would include. Most programs they offer are short, but some proprietary institutions also offer associate degree programs, and one is developing a baccalaureate program. Nationwide, private schools and colleges account for almost 17% of the associate degrees conferred in 1991-1992, but in Wisconsin they only account for 7% (Phillippe, 1995: 36). Many of the programs offered by proprietary institutions are in areas where people are quasi-self-employed, such as in real estate and in tax preparation.

Private educational establishments are most important as a competitive threat to the UW, as they account for 25% of the bachelor's degrees conferred in Wisconsin in 1991-1992 (Phillippe, 1995: 36). Nationwide, their market share for bachelor's degrees is larger than in Wisconsin: 33%. The private institutions in Wisconsin at this level are 3 universities, 4 technical and professional postgraduate schools, and 5 theological seminaries (WLRB, 1995: 641). In September 1994, all private four-year colleges, technical and professional schools and theological seminaries enrolled 51,349 students, as compared to 152,281 students for the UW (WLRB, 1995: 642-43). The largest private educational establishment in Wisconsin was Marquette University, with 10,750 students.

### 4.2.8 Conclusion

Four-year college attendance really pays off in the U.S., and Wisconsin is no exception. As a consequence, the K-12 system's most important goal is to prepare its students for a four-year-college career. But the high schools in the K-12 system also provide vocational courses, which are attended primarily by the non-college bound.

The most important source of VET in Wisconsin is, however, the technical college system. It offers primarily school-based courses. Some are academic (i.e. in college parallel programs and a core in associate degree programs), but most are vocational. In addition, it offers related instruction for the apprenticeship system.

Next to this public educational establishment, private establishments account for a minor but far from negligible part of education or training at each level. Only the post-secondary less-than-four-year private schools and colleges are important suppliers of VET. And in Wisconsin, their role is relatively small as compared with that of the public technical college system. Most of these proprietary institutions operate in market niches where technical colleges do not operate.

## 4.3 VET in three economic sectors

The precise pattern of interaction between the various education and training systems that were described in section 4.2 differs from sector to sector. This section will explore the organization of VET in construction, metalworking, and banking. First, however, it will discuss American industrial relations. Not only do these differ from those in Germany and the Netherlands, but they also vary across these sectors in the U.S.

### 4.3.1 American industrial relations

Visser (1995) points out that craft unions were more likely to secure an established position the earlier an industrial revolution arrived, and the sooner the elite among workers won civil and political rights. The U.S. fits this picture nicely. In America, the first generation of unions consisted of craft unions that were united in the American Federation of Labor (AFL). They rejected unskilled workers and African Americans from their ranks. Only in the 1930s a new generation of unions succeeded in organizing unskilled, black and female workers in the heavy consumer goods industries. They formed a separate peak organization: the Congress of Industrial Organizations (CIO). Both peak organizations merged in the 1950s and formed the AFL-CIO. Significant differences between the unions from both sides have remained, however, the construction unions retaining their craft union character (Visser, 1995).

In general, American unions are less inclusive than those in Germany are (Visser, 1995). Apart from the tradition of craft unionism, this is due to two related hallmarks of American industrial relations: the existence of a non-union sector and the decentralized institutionalization of collective bargaining. In the U.S., collective bargaining typically occurs at the firm level. When more than half of the employees of the bargaining unit (a plant or a firm, with the exception of higher management) votes for a union, that union will represent all employees of the bargaining unit in collective bargaining with management[17]. In this decentralized collective bargaining system there is understandably no room for extension of agreements to other firms. Thus, the 'collective' aspect of American collective bargaining agreements generally only means that they cover all workers in a firm, but not that they cover more firms. As an exception, some multi-employer agreements do exist in the U.S., mostly in the construction sector. Their number is declining, however. The lack of multi-firm collective bargaining agreements implies that labor conditions will differ more among firms than they do in Germany and the Netherlands. Either a firm has its own collective bargaining agreement with a union, or it has no collective bargaining agreement at all. The latter is actually the rule in the American labor market. Most American workers are employed in the non-union sector, which consists of firms

where either there have been no elections, or unions have lost them, and whose workers are therefore not represented. Despite the general dominance of non-union firms, unions may still be important in some sectors and some regions. Even if they organize only a minority of workers in a given area and sector, they may be able to secure a wage premium. And the fact that unions organize predominantly larger firms gives them some strategic power, the effects of which need not be limited to these firms themselves.

Since the center of power in the labor movement is wherever collective bargaining takes place (cf. Clegg, 1976), the focus of the American labor movement has been on collective bargaining in unionized firms (Rogers, 1995). To recruit members, American unions have to prove themselves by forcing unionized employers to concede higher wages and better employment terms than non-union employers: "Provide members with good wages and the unorganized will join up" (Rogers, 1995). This focus led to a 'majority-only' organizing strategy whereby unions aimed their efforts at those firms where they had or thought they could get a majority vote in their favor (Rogers, 1995). These strategic responses of American unions to the decentralized bargaining system they historically face have made the American labor movement considerably less horizontally and vertically integrated than its German and Dutch counterparts. Collective bargaining is done by local unions, giving them a crucial role in American industrial relations. Many of these 'locals' do belong to national or even international[18] unions, but there are also independent local unions. Further, there tend to be various competing (inter)national unions in a given sector. For example, whereas in Germany one union (IG Metall) represents all workers in metalworking firms, in the U.S. the International Association of Machinists and Aerospace Workers (IAMAW), the United Steel Workers Association (USWA), and the United Auto Workers (UAW) all organize significant numbers of workers in the metalworking sectors. The sectoral and occupational demarcations between them and other unions are less clear than implied by their names. For example, the IAMAW also organizes clerical workers, and a union such as the United Paperworkers International Union (UPIU) also organizes workers in metalworking plants. As a consequence, there is competition between unions to organize workers in similar plants and occupations. Finally, many but not all unions are members of the AFL-CIO. The United Electrical workers (UE), which also organizes workers in some metalworking firms, is an example. This decentralized organization of American labor has prevented unions from being a driving force for industry-wide definition of occupations such as the German industrial-political unions has been. The important exceptions to this are the craft unions in the building trades (section 4.3.2).

On the employers' side, the American decentralized collective bargaining process does not necessitate employers to organize themselves in associations to bargain on a regional, sectoral or national level. Thus, American employers' associations

are mostly trade associations. They predominantly represent social and economic interests, although they may also represent some minor functions in the field of social policy, such as lobbying the government. Rarely do they concern themselves with unions. Furthermore, the system of national peak associations is less coordinated than in Germany, since various associations compete for members (Van Waarden, 1995a). In addition to this decentralized collective bargaining process, the dynamic interplay between union and non-union firms in American industrial relations (Kochan et al., 1994; Visser, 1995) further complicates the aggregation of business interests on a sectoral, regional or national level. Union and non-union firms often have different interests and opinions. A case in point is the Davis-Bacon Act in the construction sector (cf. section 4.2.5), which offers unionized firms with their higher wages some protection to price competition by non-union firms. If associations organize merely one group of firms, they only represent the specific interests of part of the firms in a given sector, region or nation. And if associations organize both types of firms, they face a much more difficult task in uniting their members on common ground. This may cause them to abstain from certain policies. For instance, they may decide to limit their cooperation with unions as much as possible in order not to alienate their non-union members.

There are no works councils in the U.S., and there are no statutory guarantees of worker rights to information, consultation and co-determination. Under the "Wagner Act model", the presumptive state of workers is non-union, and unionization is the only recognized form of worker representation. Union-management relations are viewed largely as adversarial, and to protect worker autonomy, employers uproot for organs of worker representation are explicitly prohibited (Rogers & Streeck, 1994: 139). Labor-management cooperation is thus actually hampered by a labor law that treats firm-sponsored committees of workers as illegal anti-union devices (Freeman, 1994c: 224). Within these legal barriers, some 30,000 American firms had some sort of worker involvement programs in 1990, including 80% of the top 1,000 firms (Rogers & Streeck, 1994: 142). In non-unionized settings, where workers have no reserved rights, the performance and stability of the programs depends on management attitudes. Many of these programs only involve a relatively trivial routinization of management access to employee opinion, no substantive change of management giving workers autonomy and relinquishing control (Rogers & Streeck, 1994: 143).

Obviously, there is labor-management cooperation in unionized firms. But this is often hampered by the existence of a non-union sector. Since unionized employers face higher labor costs while competing with non-union firms, employers have an incentive to resist unions - either by preventing them from organizing their workers, getting a union that is already organizing their workers to lose the next election, or shifting investments to the non-union sector (Kochan et al., 1994). This has not promoted union-management cooperation. American managerial ideology

is characterized by a deep-seated opposition to unions (Kochan et al., 1994). On the other side, the continuing struggle with management of firms over organizing has not led unions to a high level of trust in management, either. A case in point is the fact that it took the Committee on the Evolution of Work from the AFL-CIO ten years to come out in favor of labor-management cooperation in the workplace in 1994 (Adams, 1995).

In the U.S., union membership forms a close proxy of the number of workers covered by collective bargaining agreements. Since the 1960s, union membership in the U.S. has been steadily declining. It peaked in the mid-fifties at about 35% of the non-agricultural labor force (Kochan et al., 1994) but has plummeted since to 15.8% of American workers in 1993 (Dresser et al, 1996: 12). Within the U.S., however, there are major differences. In general, union density is low in the south and relatively high in the North East and the Great Lakes area, including Wisconsin. In 1993, 19.4% of Wisconsin workers were union members, which meant that Wisconsin ranked 11th among American states in the level of unionization (Dresser et al., 1996: 12). Within Wisconsin, unions are historically particularly strong in the greater Milwaukee area. Their role is much smaller in the scarcely populated Northern and Western parts of the state. There are also considerable sectoral differences in unionization. The level of unionization is considerably higher in the public sector than in the private sector. In Wisconsin, the level of unionization in the public sector was 52% as compared to a mere 13% in the private sector in 1993 (Dresser et al., 1996: 58). Nevertheless, the level of unionization in Wisconsin's private sector exceeds the national average of 11%. Unions are a little stronger in the manufacturing sector than in the rest of the industry and service sector. In 1993 the level of unionization in Wisconsin manufacturing was 27%, versus 20% throughout the U.S. (Dresser et al., 1996: 56).

Finally, American unions are known to have much greater effects on wages than unions in other countries, while having roughly comparable effects on other measured outcomes (Blanchflower & Freeman, 1992). In 1993, the union premium (the percentage improvement over non-union wages that unionized workers enjoy) was 24% nationwide and 31% in Wisconsin (Dresser et al., 1996: 55). While there was virtually no wage premium for unionized manufacturing workers in the U.S., union members in Wisconsin manufacturing received a wage premium of $1.29 or 11% (Dresser et al., 1996: 56).

### 4.3.2 VET in the construction sector

Craft unionism in the construction sector is an exception to the general picture of American unionism painted in section 4.3.1. Construction unions serve as a hiring hall, and supply employers with personnel. If a contractor has a contract with the union, he is obliged to hire union-members. In principle, there are strict

demarcations between the various building occupations. Each trade has its own union: the Carpenters, the Bricklayers, the Plumbers, the Electricians etcetera. Hence, these unions are typical craft unions: all of their members are employed in the same trade/occupation/craft. A general contractor, who needs several crafts to be able to construct a complete building, signs a contract with each union. Most unions use a standard contract in a region that most unionized employers will sign.

With unions as suppliers of skilled labor, they have to make sure they train their members to the necessary skills level. And their character of hiring halls makes them directly responsible for securing both employment and high wages for their members. This is achieved through extensive apprenticeship training in apprenticeship systems that are, in effect, union-controlled. The prime means of union control has been through levy systems. Employers pay a certain amount to a trust fund for each hour that a union member works for them. These funds are the complement to the operation of area JACs that sponsor apprenticeship programs (instead of individual firms) in the (unionized) construction sector (section 4.2.5). Controlling apprenticeship gives unions the opportunity to restrict the competition on the sector's labor market. By limiting the growth of the skilled labor force, they try to prevent unemployment for their members and stimulate the wage level. Also, controlling apprenticeship enables them to control the skills level of the trade, and prevent its degradation to semi-skilled spheres.

From a labor market perspective, unionized construction in Wisconsin is an occupational labor market, for which apprenticeship serves as the gateway[19], just as it does in Germany. The biggest difference with the German apprenticeship market is that area JACs, rather than the individual firm, recruit apprentices. Aspiring apprentices apply with the relevant area JAC, which may use an aptitude test and interviews to select candidates. There are generally two procedures for actual placement of apprentices in training companies. The rank-order list method implies that the area JAC creates a list of candidates in order of their performance in test and interviews, and then refers the first one on the list to the next employer looking for an apprentice. The letter of introduction method implies that those candidates who meet the basic requirements get a letter of introduction from the Committee with which they can start the search for a training firm themselves (BAS, 1992). In the first case, the area JAC regulates the local apprenticeship market, and limits competition among prospective apprentices and among training firms as it occurs in Germany. In the last case, the practical difference may be negligible: one could say that the area JAC then fulfills the thorough screening of apprentice candidates that is provided by high school certificates and records in Germany.

The construction sector has traditionally been a union stronghold. Relative to many other sectors it still is (certainly in Wisconsin) but the U.S. union density rate in the sector has dropped drastically since the 1960s (Kochan et al., 1994: 49-50).

The other side of this coin has been a rapid growth of the non-union construction sector. During the 1950s and 1960s, non-union firms moved into residential and light commercial construction. And since the 1970s, they have penetrated the important and until then union-dominated market for heavy construction such as major office buildings and large industrial sites. Non-union activity in the U.S. construction sector increased in only ten years from 50% (1975) to 75% (1984) of all work (Kochan et al., 1994: 49). The consequence of this shift of employment to the non-union sector has been declining wages. While employment in Wisconsin construction has remained at 4.8% of total employment between 1979 and 1993, average real hourly wages have dropped considerably from $16.11 to $12.58 (in 1994 dollars; Dresser et al., 1996: 46).

Non-union firms were not formally prohibited from participating in the Wisconsin apprenticeship system in unionized construction that was governed by area JACs, and some did and do. But most non-union firms would not want to have their apprentices participate in programs governed by area JACs, half of whose members are union representatives, and the other half unionized employers. Further, non-union firms use a pattern of work organization they call the 'merit shop' - as opposed to the union shop (ABC, 1995). In the merit shop, there is not one journeyman rate for all union workers except apprentices, but there are different pay levels depending on the performance and ability of individual workers. This typically means that a core of highly skilled workers (possibly apprentice-trained journeymen who could no longer find employment with unionized firms) is surrounded by less qualified workers that usually have been trained on-the-job.

Since 1986-87, however, the non-union construction sector has had its own apprenticeship system in Wisconsin. It is governed by the Wisconsin Chapter of the principal non-union employers' association in American construction: Associated Builders and Contractors (ABC)[20]. The system is part of a national effort by ABC, and is governed by a national curriculum. The rise of the ABC system has been heavily contested by the unions, but without success. In Wisconsin, this national system is fitted in the BAS governance regime for apprenticeship, but has been separated from the unionized apprenticeship system. This implies, for instance, that there are no area JACS in the ABC apprenticeship system, nor does it have an obligatory training fund. A central ABC state committee (not to be confused with the state JAC) screens applicants for apprenticeship, and thus fulfills in this respect a similar role as the area JACs in the union sector. ABC has representatives on the Wisconsin Apprenticeship Council and in the state JACs for the building trades. In the latter, they share the seats for employers' representatives with unionized employers, whereas all the employee representatives are union members. In April 1996, there were 812 apprentices in the ABC apprenticeship system, dispersed over ten trades, which accounted for almost 10% of all Wisconsin apprentices. Thus, two different governance regimes for construction apprenticeship co-exist in Wisconsin

- and hardly in great harmony. For instance, at the start of ABC apprenticeship in Wisconsin it was inconceivable that the same technical college instructor would teach related instruction for both JAC- and ABC-apprentices. Today, the same instructor might teach both classes, but the apprentices themselves are still separated in two classes.

The traditionally strong position of apprenticeship in the construction sector helps explain that the technical colleges have tended to offer few school-based training programs in construction. It is at the same time less necessary and harder to set up a new school-based program in this sector than in another. State and area JACs do not always welcome school-based programs, particularly if these might compete with apprenticeship. They sometimes welcome programs that prepare students for apprenticeship. A technical college will not want to risk damaging its relationship with a trade and its JAC by developing a school-based program against their wishes. This could harm both the college (the trade might decide to create its own facility to provide related instruction in the future) and its students graduating from such alternative school-based programs (which might find themselves unable to secure subsequent employment in the sector).

Vocational construction programs have, however, traditionally been popular with high schools. They are relatively cheap, train for a sector with substantial employment, and teach skills that one can apply in home improvement for family and friends. Construction training programs typically start with shop classes. But sometimes they culminate in innovative forms of work-based learning. For instance, students have built a house on-site and sold it as a non-commercial community project that contributes to inner-city improvement. Such on-site house building is an old form of work-based vocational training that appears to have been substantially reduced (along with vocational education programs in general) when firms and incumbent workers experienced pressure on their markets as a consequence of the recession of the eighties. Lately, they have been revived on occasion.

### 4.3.3 VET in the metalworking sector

We have seen that there are numerous unions that organize workers in the metalworking sector, such as the IAMAW, the USWA, UAW, UPIU and UE. Similarly, there are several national and regional employers' associations on the employers' side. In Wisconsin, the National Tooling and Machining Association (NTMA) appears to be the most important employers' association in metalworking. The NTMA has two chapters in Wisconsin. This association organizes a small (but important) segment of the metalworking industry: relatively small precision tooling and machining firms, most of which are non-union. Thus, NTMA is far from representative for the entire metalworking sector. Large Wisconsin firms generally do not belong to sectoral employers' associations.

In construction, we have seen a relatively important role for apprenticeship coincide with a relatively strong associational involvement in the governance of apprenticeship at regional and state levels. In contrast, associational involvement in the governance of apprenticeship has been very low in metalworking. The only formal role of associations in apprenticeship governance is to nominate a representative to a state JAC. On top of that, unions and employers' associations may fulfill an occasional service for their members that relates to training[21]. But apprenticeship in metalworking (and, manufacturing in general) is predominantly governed at the level of the individual firm. Firms can choose from a relatively large number of specific trades to train in; and as statewide minimum standards have been lacking (outside the construction sector), firms have ample freedom in developing their own 'Exhibit A' to include in the indenture.

Union involvement in the governance of apprenticeship within firms follows the pattern of so-called job control unionism that has characterized American industrial unions. Job control unionism means that unions negotiate collective bargaining contracts with employers in which workers' rights and obligations are linked to highly articulated and sharply delineated jobs (Kochan et al., 1994: 28). The agreement specifies the tasks that a worker in any given job is supposed to fulfill, the wage he gets in return, and it typically contains a job ladder. Through seniority rules, unions govern the allocation of internal vacancies among internal candidates for promotion. Similar rules decide who gets laid off when management has decided on a lay-off, and they also decide how the remaining work is allocated among the remaining workforce (Kochan et al., 1994: 28-29). Collective bargaining agreements in unionized training firms often contain provisions regarding apprenticeship, and such firms typically have an in-plant joint apprenticeship committee that actually governs the firm's apprenticeship program.

Candidates apply directly to the firm. Each firm sets its own entry requirements, mostly a high school diploma or GED and a strong basis in reading and mathematics. However, metalworking apprentices are not always recruited in the external labor market. In many (particularly, but not exclusively larger, unionized) firms, apprenticeship training is only required (and offered) for a relatively scarce number of elite skilled worker positions. Apprenticeship openings will be posted on the internal labor market, where the incumbent semi-skilled workers will compete for them. Often, the vacancies will be filled based on seniority with the firm. In these firms, apprenticeship serves an entirely different function from that of a school-to-work transition system in (larger) Wisconsin metalworking firms: it is a work-based training system for an elite of incumbent workers. Apprenticeship here does not imply the harmonious coexistence of internal and external labor markets we saw in Germany; internal labor markets prevail instead. Outsiders (such as young high school graduates) have no direct access to such apprenticeship positions. They have to find a semi-skilled job with a large metalworking firm first, and build up

seniority there, before they can actually apply for an internally posted apprenticeship opening.

To be sure: it is not only union firms that train apprentices. Probably more than half of the training firms is non-union. Contrary to the construction sector, however, there are no separate arrangements for non-union firms. Many of those non-union training firms are of the type among which the NTMA recruits many of its member firms: smaller, highly skilled precision firms: so-called 'job shops'. These job shops train relatively many apprentices, have a smaller workforce, and thus provide a less developed internal labor market. With these firms, outsiders can sometimes apply directly for an apprenticeship position, or at least quite soon after joining the firm. While such firms are excellent examples that best practice, high performance workplaces can exist in the American low-skills environment, Rogers & Streeck (1991: 7) noted that they are relatively absent in Wisconsin. In a low-skills environment, most firms appear to adapt their product and work organization strategies to this environment and concentrate on low-skills forms of the latter (Rogers & Streeck, 1991: 8). The exceptions that do pursue a high-skills strategy are forced to train their own apprentices, even when they "are lucky to hold onto one-third of them after graduation" as a tool-and-die shop owner put it (Rogers & Streeck, 1991: 9).

A number of these job shops (try to) recruit students from one- and two-year technical diploma programs at the technical colleges for their apprenticeship positions, either upon their graduation or even before. If a student finishes a two-year certificate program in machine tool technology at a technical college and then enters into a tool-and-die apprenticeship, he is exempted from the required 576 hours of related instruction and can get credit for approximately a year's work-based training. Thus, the relationship between school-based and apprenticeship programs here is quite congenial, and sometimes they are in practice linked in a sequential way. Technical colleges do offer more school-based programs in metalworking than they do in construction. In machining, there are (besides the already mentioned one- and two-year technical diploma programs) also short certificate programs. But there are no associate degree programs. WTCS representatives give as a reason for this that their programs are bound by a two-year limit, and that machining training requires too much practical training to enable a machining program to meet the general education criteria for an associate degree program. Instead of associate degree programs, apprenticeship programs in trades like tool-and-die maker and machinist are the elite programs in the field of machining.

However, students from school-based machining programs at the technical colleges are in great demand and short supply. The capacity of the programs seems low as compared with that demand. This may be an unintended consequence of the fact that technical colleges have the policy of training people that are job-ready upon graduation. This forces them to have up-to-par equipment for such programs,

which makes them expensive – particularly in a field, which requires expensive new machinery, such as metalworking in general, and machining in particular. With most technical college districts at the upper limit of the property tax they can levy, this may explain the limited capacity for such expensive programs.

The expensive character of metalworking training is even more of a problem for high schools. Many of these host metalworking programs because of the importance of the metalworking sector, as it employs 15% of Wisconsin's population (Rogers & Streeck, 1991: 4). But it is difficult for them to afford good equipment. Thus, metalworking firms "find the present K-12 system deficient in producing job entrants with the basic skills needs" (Rogers & Streeck, 1991: 9).

In sum, school-based training in Wisconsin has not been able to offer full compensation for the lack of work-based training (as compared to Germany). Skilled metalworking labor has been in short supply, and firms experience problems implementing changes in work organization and production techniques as a result of the low-skills level of their workforce. The lack of skilled labor has recently inspired some firms to revive their apprenticeship programs (Rogers & Streeck, 1991: 9-10); and some have embarked on admirable worker training initiatives (cf. section 4.6.4).

### 4.3.4 VET in the banking sector

The situation in the banking sector is again completely different from that in construction and metalworking. To begin with, there are no important unions in American or Wisconsin banking, which makes banking almost entirely a non-union sector. Moreover, there is no apprenticeship system, either.

This lack of unions and apprenticeship has enabled the most important national employers' organization (American Bankers Association - ABA) to capture the sectoral training market on its own. It has developed its own training institute (American Institute of Banking - AIB) that supplies training modules at freshman and sophomore college level. These are used by most Wisconsin banks to train their personnel, and the programs are typically offered through sub-state regional chapters of the association.

Wisconsin's technical colleges and high schools offer programs in financial services. The latter train students for teller-positions (e.g. through cooperative education in which an estimated 300 students participate). But banks also use many four-year college students that may share one teller position as their side-job. Since teller positions pay very low wages, the technical colleges have the policy to aim their training for this sector at higher rungs on the job ladder. They used to train for teller positions in the past, but have abandoned all but one of the programs concerned. The technical colleges offer various different programs that train for specific positions, and sometimes also do so for specific segments of the banking

sector (e.g. credit unions rather than all types of banks). The AIB curriculum is an important guideline for their programs, which implies that such programs compete with the AIB courses.

The intermediate (and lower) level employees in the banking sector seem to form a relatively volatile segment of the labor market. Many of the sector's incumbent intermediate-level workers appear to consider their current (often part-time) jobs as transitional rather than as part of a career occupation. The exception to this is a core of employees that advance on the bank's internal career ladders. They are often trained for promotion through AIB training modules. Employees entering such courses (or technical college programs that offer similar curricula) have typically started in the teller position, from which these courses seek to help them progress to higher rungs of banks' internal labor markets.

ABA offers the AIB courses a rather wide sectoral validation and legitimization, and these appear to constitute a decent training system that in effect seems a decent equivalent for apprenticeship. The difference with typical apprenticeship markets is that the banking labor market is vertically fragmented into over 20 job rungs. Most labor markets constituted by apprenticeship tend to be more vertically integrated. Further, the modularized structure of training appears to stimulate large banks to poach from smaller banks. Finally, spokesmen from the sector indicate that the sector is in need of broader job descriptions and (thus) training (Keltner, 1995[22]).

### 4.3.5 Conclusion

Two important lessons stand out in this section. First, the role of the various education and training systems described in section 4.2 is very different from one economic sector to another. For instance, while apprenticeship is very important in the construction sector, it does not even exist in the banking sector. And, whereas the relative flourishing of apprenticeship seems to have limited the development of school-based technical college programs for the construction sector, both types of programs co-exist quite harmoniously in the metalworking sector, where they are often linked informally, in a sequential way.

Second, industrial relations at the national and sectoral level have important consequences for the organization of VET. These consequences are most direct for apprenticeship training, but also significantly influence school-based training. In general, American industrial relations do not seem to be very congenial to the development of one coherent training system at the national or sectoral level.

## 4.4 America's missing middle

### 4.4.1 A history of crises-inspired educational reform

American education history is marked by several crises that triggered reform efforts. In the fifties, the successful launching of the Sputnik by the Soviet Union was a severe blow for American self-conscience. Many feared the U.S. was about to lose the 'race for space', and attributed this to a lack of rigorous academic training in the nation's K-12 systems. This led to the National Defense Education Act of 1958, which provided new funds and responsibilities for the federal government to improve schools' performances (Chubb & Moe, 1990: 7).

In the early eighties, a new exogenous shock brought the U.S. educational system under close scrutiny, when an economic crisis struck the U.S. a severe blow. Many reports have analyzed the performance of American education, but one in particular has come to symbolize this crisis. The report's title, 'A Nation at Risk', didn't leave any doubt as to its message (National Commission on Excellence in Education, 1983). It drew attention to the relatively weak academic performance of American students in primary and secondary schools. This relatively weak performance was established by two different lines of research (Chubb & Moe, 1990: 8). First, student scores on the American Scholastic Aptitude Test (SAT) declined from the mid-1960s through 1980. Second, student results on international standardized academic tests showed that U.S. students did poorly in mathematics, average or below average in science, and had mixed results in geography as compared to their foreign counterparts (Stedman, 1994: 24)[23].

In the wake of this report, states initiated reforms that focused on improving college preparation. They strengthened graduation requirements and statewide testing, and increased teaching standards (DOE, 1993: 16). Education became a prime topic in the 1988 presidential elections, with future president George Bush declaring his intention of becoming the 'education president' (Chubb & Moe, 1990: 11). Elected, he subsequently met with the American governors on an Educational Summit on school reform. The summit was only the third in American history, and the first since 1933, where the president met with all governors to work exclusively on one particular problem (Chubb & Moe, 1990: 11; 281).

By that time, the focus on academic education was starting to be accompanied by growing attention for the problematic school-to-work transition of American youngsters. The core problem is a 'chronic scarcity of career jobs' (Stern et al., 1995: 1) available to them. First, American youngsters experience substantially higher levels of unemployment than adults. In 1993, 19% of American 18-19 year olds was unemployed, as compared with only 5.7% among those between 25 and 54 (Stern et al., 1995: 5). Second, the scarcity of interesting job openings has caused young people to 'flounder' for a while on the American labor market before

finding a more permanent and promising job. The average American high school graduate that does not enroll in post-secondary college education holds six different jobs and goes through four or five spells of unemployment between the ages of 18 and 27, with a joint average length of 35 weeks (Veum & Weiss, 1993; Stern et al., 1995: 5).

Klerman & Karoly (1994; 1995) argued that the situation was not as disastrous, since they found that the median male high school graduate entered a job lasting three years by age 22 - considerably sooner than some had argued. But Klerman & Karoly have not looked at the employment conditions of those jobs. Their findings still show that:

- American youngsters hold many different jobs during their early labor market career, even when not counting jobs they have while attending school or college full-time;
- male high school graduates at the 75th percentile (instead of at the median) only enter a job that will last three years at age 25;
- a large share of young males are neither in school nor working full-time after leaving school.

This concern for the school-to-work transition of American youngsters hooked up with other concerns on the development of American society. On the one hand, the slipping performance of the American economy (as indicated, for instance, by the relatively low growth of productivity) and the growth of international competition caused a growing concern that the current skills level of the American workforce was not enough for continued high economic growth. The American Society for Training and Development was one of many organizations to argue the need for a more highly skilled American workforce to compete in the 'new' economy (Carnevale, 1991). On the other hand, the drop in average weakly earnings and the growth of the number of working poor showed that American market for intermediate skills currently did not enable a growing numbers of citizens to earn a decent wage. The William T. Grant Foundation Commission on Work, Family and Citizenship (1988) specifically demanded attention for the lack of educational opportunities for that half of the American population that does not enter a four-year college. But it is the 1990 report by the Commission on the Skills of the American Workforce that is typically credited as a hallmark in translating both concerns into policy issues. Again, the title of the Commission's report is a very adequate summary of its message: 'America's Choice: High Skills or Low Wages'. The commission points out five important problems:

- the American education system lacks clear standards of achievement and fails to motivate large groups of students to work hard in school. The link between the two is that in nations with clear performance standards, attainment of these standards tends to be directly linked to employment prospects;

- (as a consequence) drop out rates are high in American high schools: over 20% overall, and over 50% in many inner cities;
- only a small fraction of non-college bound students is adequately prepared for professional work due to the lack of multi-year career-oriented educational programs;
- the vast majority of American employers is not moving towards a high-performance work organization, nor do they invest in training for the non-managerial workforce;
- the training system for the adult workforce is fragmented, and public policy in this field has been largely passive.

### 4.4.2 Why American labor markets offer little VET for youth

An important cause for the difficulty that American young people experience in finding career jobs lies in the functioning of American labor markets. On the one hand, occupational labor markets are underdeveloped. On the other, American internal labor markets have typically not demanded high skills from new recruits, but have relied on unstructured gradual on-the-job learning for incumbent frontline workers.

*The underdevelopment of occupational labor markets*

The small size of apprenticeship is a case in point for the underdevelopment of occupational labor markets. Only in unionized construction has apprenticeship traditionally laid a basis for occupational labor markets (sections 4.2.5 & 4.3.2). Still, even this occupational labor market has been relatively hard for young people. In the U.S., the ratio of the share of employment in construction for men aged 15-24 relative to those aged 25 and over was 0.75 in 1994, as compared with 1.12 for the Netherlands (OECD, 1996b: 135). Most construction apprentices are well in their twenties. Outside unionized construction, apprenticeship positions are either completely lacking (as in the banking sector, cf. section 4.3.4) or reserved for the training of a small worker elite (as in the metalworking sector, cf. section 4.3.3).

How is it that apprenticeship constitutes a high-skills equilibrium in Germany, but has failed to do so in Wisconsin (or, more generally, in the U.S.)? The governance regime that constitutes Wisconsin (and more generally American) apprenticeship today is quite different from that in Germany, even though the former was based on the German governance regime from the early 20th century (Van Lieshout, 1996b)[24]. While the German apprenticeship governance regime has significantly changed since then, as evidenced by the 1969 Vocational Training Act, Wisconsin apprenticeship is still governed by the same 1911 law (cf. section 4.2.5).

Much more important, however, is the fact that Wisconsin (and American) firms

simply do not supply many apprenticeship positions, contrary to their German counterparts. One important Wisconsin-German difference in this respect is the lack of multi-firm collective bargaining agreements that set relatively high minimum wage rates across sectors and regions in Wisconsin. A second important difference is the fact that American firms face few constraints on lay-offs as compared to their German counterparts. The combination of both enables American firms to pursue business strategies focusing on low wages and numerical flexibility, as opposed to the high-skills strategies of larger German firms. Quite simply put, skills demands for a substantial number of jobs in American firms pursuing low-wage and numerical flexibility strategies, will be lower than in their German counterparts. Tayloristic work organization originated in the U.S. and shaped work organization in American firms.

Important evidence for this comes from Parker's historical research on the attempt to create a German-style apprenticeship system in Wisconsin metalworking in the Milwaukee district in the first decades of the 19th century (Parker, 1994; 1996). We saw that Wisconsin based its VET and apprenticeship legislation to an important extent on the contemporary German example in the first decades of the twentieth century (cf. section 4.2.5). On the empirical basis of his historical research, Parker argues that when this apprenticeship system collapsed in the depression of the nineteen thirties, it was not the depression alone that caused this collapse. Parker keenly observed that while these metalworking employers had been active in organizing apprenticeship in the nineteen twenties, they were at the same time eroding the basis for it by gradually adopting Tayloristic and Fordist production methods that would leave the majority of their workforce in *semi*-skilled jobs. Thus, they had less need for intensive apprenticeship training to the journeyman level.

Even today, the lower levels in the work hierarchy in many metalworking and other industrial firms are relatively low-skilled, and the jobs there can easily be learned on the job in a relatively small period of time. Second, the large number of hierarchical levels in large firms provides for the possibility for workers to move up through a large number of small steps. On-the-job training, work experience and an occasional short course will enable them to move to a slightly more demanding job on the next rung.

In addition, because starting wages for regular workers can be lower in Wisconsin than in Germany, and because apprentice wages are relatively higher, there is a substantially slighter (if any) benefit (in terms of lower training costs) in apprenticing somebody over hiring him/her as a regular worker and training that person informally on-the-job. At the same time, higher wage differentials make it easier to poach trained workers than in Germany. And the fact that few firms provide apprenticeship training in itself reinforces the chances that one's own apprentices will be poached. Thus, the (expected) benefit of apprenticeship training is more uncertain – and thus lower. Poaching seems indeed much more common

in Wisconsin than in Germany (Rogers & Streeck, 1991: 8-9). 'Poaching', to be sure, is not necessarily a pirating action by another firm, but may very well be a consequence of a worker's own choice to leave. In fact, some historical explanations for the decline of American apprenticeship in the 19th and early 20th century blame it on the fact that apprentices left firms before these had recouped their training investments. They do not blame a lack of interest in apprenticeship from employers and their associations (Elbaum, 1989; Jacoby, 1991; Elbaum & Singh, 1995). Either way, American firms fear that the profits of their investments in broad occupational training may be reaped by their competitors. Thus, they tend to limit their training investments to firm- and job-specific forms of on-the-job training. Their work organization allows for such a strategy, as new external recruits can start in relatively low-skilled jobs and work their way up.

Furthermore, Wisconsin's technical colleges provide a quality school-based alternative to apprenticeship training, whereby the cost of training is at least shared by the student and the state. Many WTCS students study part-time while being employed, and many firms cover their tuition costs for them. In this sense, one could say that they prefer to invest in training under another governance regime than apprenticeship.

Finally, one cannot neglect the fact that the image of apprenticeship as an institution in the U.S. has always been strongly connected to union involvement. The prestige of American unions being much lower than their German and Dutch counterparts, and with adversarial industrial relations, this alone will have been sufficient reason for many non-union employers to shy away from it (Jacoby, 1991).

*The inadequate supply of broad training on American internal labor markets*

Internal labor markets can be seen as a mechanism to prevent poaching, since these limit access to the most attractive jobs to those who stay with their firm (Sako, 1991). Internal labor markets do not necessarily complicate the school-to-work transition or lead to less or more narrow training than occupational labor markets do. Throughout the international comparative VET literature, Japan is the routinely cited case-in-point (Sako, 1991; Rosenbaum, 1996). The Japanese culture of (large) firms offering their workers life-time employment keeps inter-firm mobility low, and thus enables them to substantially invest in training their new recruits.

Internal labor markets play a dominant role in the U.S., but they have lacked lifetime employment guarantees. Furthermore, they have been characterized by the Tayloristic and Fordist tradition of work organization in American industry. First, jobs on the lower rungs of the internal career ladder are relatively low-skilled. The relevant tasks can easily be learned on-the-job fast. Second, promotion is

often granted according to formalized job ladders and seniority rules. The relatively large number of hierarchical levels in American firms provides the possibility for workers to progress by many small steps through a sequence of increasingly skilled jobs. Informal on-the-job learning in the current job typically provides sufficient experience for the next rank (Dresser et al., 1996). Apprenticeship positions in larger firms (if there are any) tend to be the vehicle for internal promotion to the (few) journeyman positions that form the upper layer of those internal markets for frontline workers (cf. section 4.3). Outsiders are typically hired only on the bottom rung(s) of these job ladders. Since these entry-level jobs are not apprenticeships, young people are as expensive to hire for those jobs as adult workers are. This is why American employers have generally preferred to hire adults for such positions (Osterman, 1980). So contrary to Germany, young people have to compete with older workers for entry-level jobs that do not include any formal training rights.

Paradoxically, when firms started to steer away from this type of internal labor markets by reducing the number of rungs and creating cross-functional jobs, this did not solve the school-to-work transition problem, but aggravated it (Dresser et al., 1996). Skills levels for entry-level jobs rose, which meant that new recruits now needed some initial occupational training in order to qualify for them. As a consequence, the discrepancy between the skills level of the average high school graduates and the level necessary to qualify for a (promising) job has grown. Within the pattern of the traditional American school-to-work transition strategy (hopping from a low-skilled job to a to slightly-less-low-skilled job) this implies young people will have to progress through more jobs where they can learn informally on-the-job before finally attaining a skills level that qualifies them for a semi-skilled entry-level job with an attractive (large) firm.

*Conclusion*

In the words of Harhoff & Kane (1993), the underlying mechanisms of the American labor market rewards mobility and job matching, contrary to the German labor market which thrives on human capital investments and relative lack of mobility. That higher mobility thus coincides with lower training investments from firms is in line with theoretical expectations; this section has shown, how institutions, or the lack of them, influence this relationship.

### 4.4.3 Why American schools offer little VET

There are no indications that a lack of apprentice candidates has stalled growth of the apprenticeship training volume. Facing a small supply of apprenticeship positions on the external labor market, the American youth has two alternatives. The first (and most attractive) is to enter higher education, an option chosen by

a significantly higher share of a youth cohort in the U.S. than in Germany. In Wisconsin, approximately 40% of a cohort transfer to a four-year college after high school, and another 6% to two year college parallel programs (Rogers et al., 1991: 127).

19% transfer into non-college parallel programs in technical colleges and other post-secondary schools. The high wage differential between those with and without some college education make it attractive to at least enter higher education, since college experience (even without subsequent graduation) serves as an important signaling tool towards future employers. And the associate degree and vocational programs offered by the technical colleges do provide a school-based alternative for apprenticeship that does not exist in Germany. In fact, taking such a program might very well serve as an important preparation for an apprenticeship later. In metalworking, various firms that do recruit apprentices on the external market try to recruit students from one- and two-year certificate programs of the technical colleges for their apprenticeship positions, either upon graduation or even prior to that (section 4.3.3). So theoretically, an ample supply of quality school-based training and a massive participation in it could compensate for a lack of work based training for young people. But, despite the aforementioned wage differentials, American internal labor markets have given young people little reason to enroll in demanding school-based VET courses:

- First, opportunities for entering other firms on higher job rungs are scarce, so VET certificates do not directly qualify for more attractive occupational labor markets; of all workers, a staggering 94.2% of German workers indicated they had needed qualifications to obtain their current job, as compared to only 55.8% of their American counterparts (OECD, 1994b: 144);
- Second, entry-level positions in American internal labor markets typically don't require many skills;
- Third, formal general or vocational credentials have typically counted less than seniority for promotion to higher rungs on internal career ladders;
- Fourth, pay-rates are based solely on the characteristics of the job, not on that of the worker – or his/her credentials. As an indicator, the relative importance of human capital variables to industry variables in explaining inter-industry wage differentials is substantially lower in the U.S. than in Germany (Bellmann & Möller, 1995: 153).

Most non-college bound youngsters have therefore historically opted to directly enter the labor market, accept an un- or semi-skilled job as attractive as can be found, and slowly work their way up from there.

*High schools*

American labor markets do reward high school graduation. Male high school graduates in Wisconsin earned $3.67 an hour more in 1993 than those who did not graduate (Dresser et al., 1996: 34). For women, the difference was $2.58. Both differences are larger than they were in Wisconsin in 1979, and larger than they were nationwide in 1993.

In 1992, the graduation rate from upper secondary education was 75.7% in the U.S. (OECD, 1995, p. 214). While this graduation rate may seem satisfactory, the competency levels of graduates are not. Boldly put, the problem is that (Tucker, 1994a: 4):

> "...the high school diploma requires achieving only a seventh or eighth grade level of literacy, showing up most of the time and not causing too much trouble. In fact, because taking a tough course and flunking it can result in no high school diploma, it makes more sense to take undemanding, vacuous coursework and to work only hard enough to get a passing grade."

Apparently, the lack of competency standards lets schools for younger age groups simply pass their failures and problems up to the top of the system (Tucker, 1994b: 3).

And this lack is not compensated by rigorous screening of high school records by employers when they hire youngsters and young adults. It appears that high school certificates serve merely as a general screening device for employers. For first employers, a certificate in itself tends to be enough. There is no relation between school performance and the attractiveness of first jobs in the U.S. (Rosenbaum & Kariya, 1991). We have seen that the jobs American youngsters typically start their labor market careers with do not require many skills, and that they will not hold them for a long time. Thus, graduation will mostly guarantee to the employer that a school-leaver has enough basic skills to (learn to) perform the job. The few that do not, can easily be fired. And since young people will not stay around with the firm for the rest of their careers, it is unnecessary to assess their potential to grow towards more demanding jobs. Finally, by the time that the young adult finds an employer that offers him a more career-promising entry-level position on an internal labor market, this employer will find an applicant's last job(s) and any (technical) college courses taken since high school graduation more informative than the students' high school transcript of a few years back.

While American labor markets thus do not exactly encourage young people to work hard in secondary school, four-year colleges do. The fact that the American four-year colleges differ in status makes competition to enter them just as much a rank-order tournament as competition for the best apprenticeship positions does in Germany. This way, the number of high school graduates that transfers to a

(prestigious) four-year college has traditionally been the most distinct benchmark to measure the performance of American high schools. This, and the fact that American youngsters transfer to four-year colleges in much larger numbers than in continental Europe, has made college prep the dominant track in American high schools, and has allowed an underdevelopment of VET programs. This underdevelopment was reinforced by the fact that VET programs are relatively expensive. The small size of the average American school district prevents enrollments in specific vocational programs from being high enough to warrant the investments in top-notch equipment in an area like metalworking. And the American dislike for tracking young people in separate tracks has kept the parents of this 'forgotten half' from demanding such programs.

And, to complete this vicious circle, with few high school students graduating from quality vocational programs, firms have had little reason to aim their recruiting efforts for their more demanding entry-level positions at high school graduates. Recruiting more adult workers with relevant experience in similar jobs will generally be the safer route.

*Two-year colleges*

It is, in this context, easy to understand why America's two-year colleges, such as Wisconsin's technical colleges, have been a success story (Brint & Karabel, 1991): they offer quality training in a low-skills environment. The training offered by Wisconsin's technical colleges reach a large share of the population, and both employers and graduates are generally satisfied. The system's strength lies in offering quality training to (young) adults and firms.

It does, however, (so far) not supply the large majority of non-college bound youngsters with a smooth school-to-work transition the way the German apprenticeship system does. Relatively few people enroll in WTCS programs immediately after high school. The majority of FTE enrollments in WTCS programs is in associate degree programs that are college-level and train the lowest level of management rather than frontline workers. They will be too demanding for the majority of the 'forgotten half' of Wisconsin's youth. Only about a third of WTCS FTE enrollments is in vocational programs that train frontline workers (Rogers et al., 1991).

And few people actually complete one- or two-year programs. Most students restrict themselves to a few courses. This is plausible in the light of the previous analysis of American internal labor markets. If most jobs open to outsiders are on the lower rungs of company career ladders, one does not need that much training to accomplish the tasks. And, in a low-skills environment where few people have substantial formal vocational qualifications, a few courses will suffice to signal willingness and ability to learn to the employer, and to beat most competition for a job as well.

### 4.4.4 Conclusion: the missing middle

In sum, current American school-based VET has not been able to offer full compensation for the few opportunities for substantial work-based learning that firms have tended to offer to American youngsters. Total quantity of school- and work-based VET for youngsters and young adults in the U.S. is low as compared with that in other countries. As Berryman et al. (1992: 1) put it:

> "...as Europeans have observed, the US education and training system is 'missing the middle'. It has no coherent educational strategy for the many young people who now complete high school equipped neither to complete college nor for the training required to enter middle-level jobs."

Further, the lack of national or statewide (skills) standards and assessment procedures does not guarantee a certain minimum quality of VET. And, the dispersion of VET across various independent and decentralized systems that are only weakly linked, does not make the available options very transparent for young persons, parents or adult workers. In short, there are problems of too little coordination and cooperation in these areas (Rogers & Streeck, 1991: 11).

It is in this context that American and Wisconsin policy-makers have embarked on ambitious attempts to 'build the middle' (Berryman et al, 1992) in the nineties. They have developed reform efforts that generally try to improve the school-to-work transition for American youngsters through the development of coordinated industry-wide VET systems. Specifically, these efforts have included some polices inspired by the German example. One is the attempt to increase the opportunities for work-based learning for young persons; another, the attempt to develop national skills standards and assessment procedures that allow benchmarking of training quality in schools and firms.

## 4.5 Federal reform policies

### 4.5.1 General directions

The Commission on the Skills of the American Workforce (1990) recommended the development of a new skills development system that provides frontline workers with world-class skills, and encourages firms to develop high performance workplaces. The latter means that firms adopt a competitive strategy that builds on the training of the workforce. Traditionally, American business has been dominated by Tayloristic/Fordist firms that employ a low-skills strategy. In the view of the commission, a high-skills strategy would improve the competitiveness of American business, help raise the wages for frontline workers, and thus help address the

poverty problem. The Commission specifically recommended to:

- establish a certificate that sets a very high nationwide standard for foundation skills to be achieved by American students at age 16;
- make sure that no one is left out of this strategy by establishing alternative education and job experience programs that can train drop-outs to achieve this standard;
- build a system of employer-recognized occupational skills standards, and develop a system of combined classroom work and structured on-the-job training to teach these to young people and adults;
- develop policies and programs to promote high performance work organization, i.e. by requiring employers to spend a minimum proportion of their payroll on the training of frontline workers;
- create a coherent national, state and local labor market system for the entire frontline workforce based on the new occupational standards.

This report was certainly not the only one to provide a challenging view of the development of American VET, but it quite adequately represents the general thrust of most. Rather than discussing other reports that influenced state and federal policies, we will concentrate on two specific areas of policy development at the federal level. These are, first, policies that aim to improve the school-to-work transition for young people. Increasing the role of work-based learning is one important strategy to achieve this, a strategy we will concentrate on in particular. Second, we will discuss the policy that stimulates the development of voluntary national skills standards. Both policies have been promoted by the Commission on the Skills of the American Workforce (1990) and by the Independent Advisory Panel to the National Assessment of Vocational Education (Boesel & McFarland, 1994: 1-5). They are linked, in that both are considered necessary to address America's greatest weakness in the field of VET: the lack of a comprehensive system of workforce preparation (Boesel & McFarland, 1994: 2).

### 4.5.2 School-to-work policy

> "The school-to-work transition initiative is characterized by programs and curricular changes which are intended to prepare secondary school pupils to enter the workforce, whether immediately following high school graduation or after some type of postsecondary education. Generally, school-to-work programs are aimed at encouraging students to plan for a career more thoroughly and at an earlier age; acquainting students with alternatives to a baccalaureate degree (such as an associate degree and apprenticeships); and forging partnerships between K-12 schools and technical colleges, universities and businesses in order to provide distinct pathways from school to the workforce." (Bonderud & Bukolt, 1995, p. 1)

The goals of U.S. school-to-work policies could not be described in a more focused way. These policies derive their name from the federal 1994 School-to-Work Opportunities Act. But many of these policies, and the debate surrounding them, predate this Act.

#### 4.5.2.1 The debate on youth apprenticeship

Before turning to the 1994 School-to-Work Opportunities Act, it is helpful to discuss its roots. The Act can be traced back to a draft for another Act that circulated in the early nineties. This draft promoted a much more focused concept than that of school-to-work programs: work-based learning through forms of youth apprenticeship.

Work-based learning is not something American high schools are completely unfamiliar with. Some American (and, for that matter, Wisconsin) high schools have always had cooperative education (or: co-op) programs that allow students to earn credit for paid work experience. But their size is relatively small: 400,000 secondary students participate in them nationwide (Boesel & McFarland, 1994). And they are not governed by state or federal standards, nor are they tied to central examinations that entitle those who pass to receive a recognized credential that signals a certain minimum level of competence. This makes it hard for co-op graduates to cash in on this training in the labor market. Co-op only results in higher student earning when its graduates stay on with their co-op employer (Stern et al., 1995). This situation has led many American experts (e.g. Hamilton, 1990; 1993) to plead for the development of a more rigorous form of work-based learning in the form of youth apprenticeship.

The concept of youth apprenticeship is to an important extent based on the role model of the German apprenticeship system. The U.S. Department of Labor (DOL) has sponsored a School-to-Work Transition/Youth Apprenticeship demonstration that began in September 1990 with grants to six organizations to develop and implement a wide array of programs connecting schools and employers and integrating school- and work-based learning (Corson & Silverberg, 1994: ix). The Bush senior administration developed a draft for a National Youth Apprenticeship Act to be submitted in Congress in the spring of 1992. The School-to-Work Transition/Youth Apprenticeship Demonstration continued in the fall of 1992 with an extension of funding for five of the original grantees, and ten additional two year grants specifically for the development of youth apprenticeship (Corson & Silverberg, 1994: ix). The first Clinton administration took over the initiative and called for a national apprenticeship system similar to the German dual training system (Büchtemann et al., 1993). Some states (among them Wisconsin[25]) and localities started their own experiments with youth apprenticeship. The (true or false) promise of youth apprenticeship was an important issue in the debate among American VET researchers in those years (i.e. Hamilton, 1990; 1993; Rosenbaum et

al., 1992; Shenon, 1992; Bailey, 1993; 1995; Corson & Silverberg, 1994; Zemsky, 1994).

Achieving one uniform national system is, however, quite difficult in the U.S.. The structural reason for this is that the primary responsibility for education lies with the individual states. A more time-related reason is that the American political tide in the mid-nineties was not very favorable to plans that entail an enlargement of the role of the federal government. Thus, it is not surprising that the initial work on a Youth Apprenticeship Act in the end has led to a substantially less directive Act: the School-to-Work Opportunities Act.

#### 4.5.2.2 The School-to-Work Opportunities Act

The School-to-Work Opportunities Act was passed by Congress and signed by the President in 1994. It was authorized through the federal fiscal year of 2001, when the initiative was to sunset. The Act is administered jointly by the U.S. Departments of Education (DOE) and Labor (DOL).

This act does not confine itself to promoting youth apprenticeship as a vehicle for improvement of the school-to-work transition, but incorporates various possible institutional mechanisms. And, second, it makes states and local partnerships the central actors in VET reform, rather than attempt to develop a national system per se. States are required to develop policies to arrive at an encompassing school-to-work transition system. But they can come up with their own specific proposal for such a system, and for the policies needed to develop it. These proposals have to contain three core elements:

- school-based learning: classroom instruction based on high academic and occupational skills standards;
- work-based learning: work experience and structured training and mentoring on job sites;
- connecting activities: activities that integrate classroom and on-the-job instruction, match students with participating employers, train job-site mentors, and maintain bridges between school and work.

In order to help states get such initiatives off the ground, the School-to-Work Opportunities Act has set up the following financial assistance programs for which states could submit applications (Bonderud & Bukolt, 1995: 5):

- development grants to assist states in planning statewide school-to-work programs;
- implementation grants to assist states in providing sub grants to local partnerships to carry out school-to-work programs;
- direct implementation grants to local partnerships;
- national demonstration projects.

Since 1994, all states have received (relatively small) development grants. Only the states with the best-developed policies and plans have received implementation grants. Eight states (among them Wisconsin) received the first school-to-work implementation grants in 1994, and 19 additional states received such grants in 1995 (DOE & DOL, 1996). An important part of these federal funds that states receive flow to local partnerships to implement plans they have submitted to the state government. These local partnerships had to consist of employers, representatives of local educational agencies and local post-secondary educational institutions, local educators and representatives of union or non-managerial employee representatives, and students, and could also include other groups. A limited number of local partnerships can receive direct federal funding, irrespective of the policies and plans of its state government. In this way, the contents of specific school-to-work policies developed at the state and local level, within a global federal framework. We will discuss these contents in more detail in section 4.6, when we describe school-to-work policy in the state of Wisconsin.

### 4.5.3 Skills standards policy

#### 4.5.3.1 The SCANS reports and the need for standards

February 1990, the U.S. Secretary of Labor set up the Secretary's Commission on Achieving Necessary Skills (SCANS). It consisted of 31 business, labor, education and government representatives, and had to foster awareness of the importance of enabling students and workers to master the skills associated with quality jobs (DOL, 1994: 3). In its initial report, the Commission concluded that students had to develop five competencies and a three-part foundation of skills to secure good jobs (SCANS, 1991). In its final report, the Commission highlighted four key areas of action: reinventing schools, fostering work-based-learning, reorganizing the workplace and restructuring assessment (SCANS, 1992). SCANS has been very influential in setting the debate on what all students should learn in the U.S.. For instance, it has been an important basis for the previously discussed school-to-work policies. But SCANS' clear phrasing of the necessary skills for high school graduates has also enabled the subsequent debate to focus on a question that is at least as important: the need for national standards in American education and training.

The lack of national standards that define a minimum level of competence to be attained in specific education and training tracks is considered an important institutional weakness of the American education and training system. Two different arguments are used to support this assessment. First, national standards would improve accountability of schools, school districts and state K-12 systems. Standards confront students, schools, school districts and states with their performance relative to others, which should stimulate all, but especially the weak performers, to do better.

The second argument does not seek to influence schools, but instead is directed at firms. National industry skills standards would confront individuals and firms with the prevailing skills standards in high performance workplaces in their industry. This confrontation should encourage them to adopt such high skills standards themselves, which would imply developing broader job descriptions that require more and higher skills. Since many current workers lack such skills, the direct effect would be that firms would step up their investments in training and broaden its contents. Also, it would enable them to use such standards to guide their selection and recruitment policy. And if companies would actually use such standards for recruitment purposes, this would indirectly encourage secondary and post-secondary schools and colleges to use such standards as benchmarks for their own VET programs.

Academic standards could also improve school and student performance. But their effect would most likely be weaker than that of skills standards. The latter offer two advantages as compared to academic standards in this respect. First, they do not merely influence school-based education for young persons, but also stimulate work-based training. This way, they potentially raise the skills level of the entire workforce, and not merely that of the new recruits that enter the labor market. Second, because academic standards do not (directly) raise the demand for skilled labor at the intermediate level, they will be less relevant for the non-college bound that plan to enter the labor market directly upon high school graduation. And it is exactly this group for which new standards are most important. For the college-aspiring majority of students, (four-year) college entry requirements and particularly the ACT- and SAT-tests have always been a partial functional equivalent for formally articulated standards[26]. These tests measure performance in academic areas, and entail the bonus of getting accepted in a more prestigious college for those who perform well.

The remainder of this section is therefore dedicated to the federal policy regarding skills standards. As for academic standards, we will confine ourselves to two observations. First, nationwide academic standards have been developed in a limited number of areas (i.e. in mathematics and history). Second, they have been developed separately from skills standards[27].

#### 4.5.3.2 Skills standards in the U.S.: practice and gaps

Skills standards have not been completely absent in the U.S. Wills (1994b; 1994c) needs two large volumes to describe existing American education and industry driven skills standards systems. As to education driven skills standard systems, the 1990 reauthorization of the federal Perkins Act for the first time provided federal fiscal support for national skills standards, as well as for state work on standards (Wills, 1994a: 11; 1994b). Several state consortia have been formed to collaborate in this field but not one set of skills standards is used by all states, and within states

the standards are used by some local districts rather than statewide (Wills, 1994a: 12; 1994b).

In addition, Wills (1994a: 16; 1994c) identifies 168 industry driven skills certification programs. Most are directly related to an occupation or profession where government intervention to regulate industry had occurred or had threatened to occur (Wills, 1994a: 14). But most offer only one or two certificates and few are targeted at the entry-level workforce[28] (Wills, 1994a: 18-19; 1994c). And only in very few cases is there a single industry association that offers the only certification program that is used by the entire industry. Most associations are specialty associations, and thus their standards tend to focus on their specialty area. Still, competition is often a concern, as when 21 organizations offer nursing certification (Wills, 1994a: 18-19; 1994c). Few standards systems have any formal links to mainstream secondary or post-secondary programs, which implies they have little impact on curricula (Rahn, 1994: 2). Industry driven skills standards are lacking for important sectors, such as large portions of the manufacturing sector (Wills; 1994a: 14; 1994c). And there was no common framework or language to facilitate the debate on standards. In sum, the development of skills standards has occurred in as decentralized and dispersed a way as the organization of American education and training in general. Wills (1994a: 2) has concluded that this current practice entails significant gaps:

- few systems include levels from novice to master in an occupation;
- in some important competitive sectors, there are little or no skills standards systems;
- there is no coherent pattern of financing behind the systems, which hampers their cost efficiency and effectiveness;
- the systems do not adequately support development and upgrading of instructors;
- there is no common agreement on the definition of an industry or an occupational cluster.

#### 4.5.3.3 DOL and DOE pilot projects

An important impetus for the American debate on national skills standards was the appointment of a National Advisory Commission on Work-Based Learning by the Secretary of Labor in October 1990 (DOL, 1994: 4). It consisted of business, labor and education leaders, and was to advise DOL on ways to increase the skills level of the American workforce, and to expand access to work-based learning at all stages of workers' careers. One of the six strategic action steps this Commission advised was the development of a national framework of voluntary skill standards and certification. In her second (and last) year of operation, the Commission subsequently spearheaded the national dialogue on this issue. As part of this effort,

DOL and DOE convened public hearings, initiated research, and planned a series of pilot projects to develop industry skills standards (DOL, 1994).

In 1992, DOL and DOE solicited proposals to pilot-test skill standards systems in various industries (Bailey & Merritt, 1995: 22-23). Such pilot project were to:

- take an industry-perspective on skills standards rather than an occupation-based approach;
- focus on an industry of significant size;
- develop standards that cover all non-baccalaureate degree workers;
- match federal funds with industry resources;
- involve all relevant parties: business, labor organizations, workers, trainers, educators, and representatives from human resource communities;
- cooperate in a loose network with other pilot projects.

DOE funded seven projects beginning in October 1992 and nine beginning in August 1993. These projects lasted eighteen months. DOL funded six twelve-month projects that began in December 1992 (Bailey & Merritt, 1995, p. 13). Later, the DOE projects were extended for a second eighteen-month period (until April 1996), and the contracts for the DOL projects were extended three times to expire in September 1995 (Moorhouse et al., 1996: 4).

These 22 DOL and DOE pilot projects were meant as experiments from which important policy lessons could be learned. Thus, they were granted considerable freedom in their approach. This has led to substantial differentiation among them on many dimensions (Rahn, 1994; Bailey & Merritt, 1995; Moorhouse et al., 1996), such as:

- the scope of the project, ranging from one specific occupation (hazardous materials management technician) to an integration of 64 jobs into four broad occupational areas (metalworking/machining); on the other hand, there were two separate pilot projects in electronics, led by two separate employers' associations;
- the composition of the partnership, particularly the extent of active involvement of unions and educators in it; most partnerships were led by employers' associations or their research/education affiliates;
- the strategic policy pursued by the partnership; some stress publicity, others consider a high quality product the most essential prerequisite for achieving long-term success;
- the processes used in developing standards and assessment procedures, and in validating these;
- the policies concerning the implementation of standards and assessment procedures;
- the actual products (occupational skills standards and assessment procedures) created.

#### 4.5.3.4 The pilot project in metalworking/machining

This differentiation implies that the description of any one of the projects can never be considered representative of the entire effort. But such a single example may improve understanding of the type of projects concerned, and (particularly) the large difference with the existing skills standards systems as in Germany and the Netherlands.

The partnership for the metalworking sector has been lead by the National Tooling and Machining Association (NTMA), but includes four other employers'/ trade associations as well. Unions were a minority partner, involved through a representative from the IAMAW and a representative from the AFL-CIO Human Resources Development Institute. After a few years, this partnership institutionalized into a separate organization: the National Institute for Metalworking Skills (NIMS). This is quite exceptional among the 22 projects.

In the initial phase of the project, the skills standards used for German metalworking apprentices were an important example. This (and other foreign examples) led to an initial skills standards scheme whose basic structure distinguished three levels and four occupational areas. The latter were metal forming; machining; tool, die & mold making; and machine building and maintenance. Since then, the actual scheme has been differentiated within and across the boundaries of this basic structure. On level one, there is one comprehensive set of standards for all four areas: general metalworking knowledge and machining skills. On levels two, three and (the not yet formally recognized level) four, several sets of standards are distinguished between and sometimes within the occupational fields. Some of the standard sets were ready (i.e. matching levels 1, 2 and 3), others were being developed, still others were just planned for some time in the future. NIMS has established criteria for firms or schools that want to implement skills standards that have been developed. In the fall of 1995, it had 23 implementation sites in 5 states. An assessment procedure to test persons for competency on level 1 standards was being developed and tested.

It is important to realize that this qualification structure developed by NIMS is modularized. Firms could only train workers in one or a few of the areas at each level. The plan is that people can acquire eight separate credentials at level 1. A special ninth credential was awarded to those that acquire all eight separate ones, but this was expected to remain an exception. The plans foresaw six written exams for the eight credentials. Two of those could be taken at any time. The other four could only be taken after the person had produced a metal component that was approved by a specific local committee recognized by NIMS.

When the federal DOL grant had expired, NIMS had to finance itself from various existing or new sources. First, the participating trade associations paid a $10,000 general contribution. Second, each association paid for the development of skills standards in

their specific occupational area. Third, NIMS had secured technical assistance grants from three states where it was implementing the level 1 machining standards with firms and/or schools. Fourth, persons taking NIMS-tests would have to pay a fee.

#### 4.5.3.5 The National Skill Standards Board

Once the pilot projects were on the way, federal policy started to concentrate on a more structural institutionalization of the development of national skill standards. Wills (1994a: 19) described three models for national skill standards systems:

- the initial preparation model, which focuses on the school-to-work transition for young persons (e.g. Germany);
- the craft certification model, which focuses on workers in high-mobility occupations (e.g. Japan);
- the comprehensive model, which focuses on both young persons and adult workers (e.g. the U.K.).

The comprehensive model has dominated the skills standards debate in the U.S.. National skills standards should guide training in various systems and establishments, and both for young people and adults. Some believe national skills standards form a second tier of standards for broad clusters of frontline jobs, often encompassing multiple industries. This second tier would exist between a first tier of general education standards for all high school students, and a third tier of standards for individual frontline jobs (e.g. Tucker, 1994b).

Federal policy has focused on the creation of an independent National Skill Standards Board (NSSB) to guide the development of national skill standards. The creation of the NSSB is required by the federal 'Goals 2000: Educate America Act: Title V: The National Skill Standards Act of 1994'. It describes six key functions of the NSSB (NSSB, 1995: 7):

- identification of occupational clusters;
- establishment of voluntary partnerships to establish standards;
- research, dissemination and coordination activities;
- endorsement of skills standards;
- coordination with the National Education Standards and Improvement Council;
- financial assistance for services to support NSSB work and grants to voluntary partnerships.

The NSSB had its first meeting in April 1995. It consisted of 27 members (according to the NSSB website). Eight represented business, eight represented labor, two were neutral human resource professionals, six represented education, government and other societal groups, and three were ex-officio members: the Secretaries

of Labor, Education, and Commerce (NSSB, 1995). Of these members, 12 were appointed by the President, 6 by the Speaker of the House, and 6 by the President on behalf of the House (Wills, 1995).

At the time of the fieldwork for this project, the NSSB was still in the process of developing its policy. It appeared to opt for the development of standards for specific cross-industry occupations that are found in high performance workplaces. The establishment of a more or less overarching set of national industry standard-setting partnerships did not seem to be high on the agenda at this point in time. This, however, might have been a consequence of the fact that the federal government had not given the NSSB the financial means necessary to achieve its goals. Government has a powerful role to play in sustaining the development of skills standards, in particular through fiscal support for the process (Wills, 1994a: 20). The NSSB received $6 million for the fiscal year of 1995, while $12 million was requested for fiscal year 1996 (NSSB, 1995: 11). This was certainly not enough to give financial support to national partnerships for all industries to develop national skills standards.

In this context, the NSSB has not even offered grants to all DOL and DOE pilot projects. Instead, it held a competition that awarded grants to 9 of the pilot projects for so-called workforce skills standards pilot projects (NSSB website). The lack of funding was not the only reason why the NSSB might have decided not to fund all former pilot projects. The DOL and DOE pilot projects were meant as experiments from which policy lessons could be drawn. It was unlikely (and given the goal of policy learning not even necessarily preferable) that every experiment would succeed. The chronological order of the creation of pilot projects and NSSB implies that some of these lessons might lead the NSSB to adopt criteria that some of the pilot projects would not meet. Either way, this policy choice could very likely demand a high toll of some of the DOL and DOE partnerships that have not received a new grant. When a partnership dissolves, it may take a while to get the stakeholders involved back at the table for a similar task later on.

### 4.6 Reform in Wisconsin

The success of federal policy programs discussed in section 4.5 will depend on their reception at the state and local levels. This chapter therefore describes and analyzes the developments in the state of Wisconsin in these areas. Section 4.6.1 will present a brief overview of the development of Wisconsin vocational education, training and labor market policies. Section 4.6.2 and section 4.6.3 will analyze the contemporary situation regarding school-to-work and skills standards in Wisconsin. Section 4.6.4 will discuss the development of a regional training partnership in the metalworking industry.

### 4.6.1 A brief history of policy development in Wisconsin

The decentralized governance structure for VET in the U.S. makes state governments important actors when it comes to VET reform policies. These have typically not been waiting for the federal government to come up with a reform policy, but have taken steps of their own to fundamentally improve their VET systems (NCEE, 1995). When relevant federal policy programs do exist, state governments of course try to benefit from the programs concerned and the funds available. The state of Wisconsin is recognized for its long tradition of education and training reform and innovations. Over the last decade, the state has embarked on the development of standards and an assessment system to strengthen the K-12 system (section 4.6.3); of a school-to-work policy (section 4.6.2); of improvement of the coordination of labor market policy services (section 4.6.2.4 and training policy (section 4.6.4); and of strengthening the connection between training strategies and economic development policy (NCEE, 1995: 49).

Some of these efforts started as early as the late eighties. At that point in time, the State of Wisconsin started to improve the governance structure for training of workers and the unemployed (NCEE, 1995: 131). The state provided several funds to improve and expand training for workers. It created a network of so-called workplace education centers in firms that provided basic educations for its workers (section 4.6.4). And in 1987, the state established a statewide system of Job Centers that provide employment and training services.

Policy development in these areas increased in the nineties. An important impulse was when Governor Thompson set up a Commission for a Quality Workforce headed by private sector leaders (DILHR et al., 1994: 7). The Commission issued two action plans (Governor's Commission for a Quality Workforce, 1991). The first was for building a world-class workforce. It urged the state to expand worker training to equip them with the skills necessary for employment in reorganized workplaces with new technologies. The second action plan was for educating the workers of tomorrow. It proposed the setting of standards for the education system, and the strengthening of technical education for the non-college bound.

Another commission appointed by the Governor advised along similar lines (Commission on Schools of the 21st Century, 1991). And a joint Task Force of DPI and WTCS (which at the time was still called the VTAE system) recommended statewide implementation of a coordinated technical preparation (tech prep) program by the 1995-96 school year. It also recommended the establishment of articulated curricula between high schools and technical colleges that allow high school students to gain advanced standing in technical college programs (DILHR et al., 1994: 6).

Subsequently, the Governor installed an Executive Cabinet for a Quality Workforce to translate these reports into legislative proposals. The legislature accordingly

passed legislation in 1991 and 1992. It required reorganization of elementary and secondary schools to help students meet academic standards, and it upgraded training opportunities at secondary and post-secondary levels. In the same period, the state further improved the availability of employment- and training-related information and services, and the coordination of federally funded job training programs. It expanded the networks of Job Centers and workplace education centers. And in 1993, the state created a Governor's Office of Workforce Excellence within DILHR to coordinate the workforce development policies that were pursued by a large number of agencies in various state departments (NCEE, 1995: 46).

After this brief historical overview, we will turn to a discussion of Wisconsin policies in the two areas discussed in the previous chapter: school-to-work (section 4.6.2) and standards and assessment (section 4.6.3). It is important to note that these policies were not the only reform efforts in Wisconsin that could more or less fundamentally alter the operation of its markets for intermediate skills. While they were important, and the most targeted at this specific goal, there were other prominent, more general debates concerning the governance of Wisconsin's K-12 system. First, the State of Wisconsin decided to shift the burden of public K-12 school finance from the individual school districts to the state level (NCEE, 1995). Act 437 created a committee that should develop a plan to have the state provide at least 66.7% of the revenue for public K-12 schools by the 1996-97 school year (Toulmin & Bukolt, 1995: 4). Second, Wisconsin experimented with the charter school concept. Charter schools are exempted from a number of laws and rules that govern traditional public schools (Bukolt, 1995c). Third, the state of Wisconsin has been experimenting with public subsidization of private school attendance by Milwaukee children from poor families through the Milwaukee Parental Choice Program. This program was established by Act 336 in 1989 (Toulmin, 1995). If a child from a low-income family enrolls in a private school, the share of the state equalization aid that would otherwise go to the Milwaukee public school district for this child will be awarded to the private school concerned.

### 4.6.2 Skills for the Future: School-to-work policy in Wisconsin

#### 4.6.2.1 Overview and history

Wisconsin's school-to-work plan is called 'Skills for the Future'. Wisconsin was one of the first eight states that received a federal school-to-work implementation grant (Bonderud & Bukolt, 1995: 4). Prior to that, the state had already received a federal school-to-work planning grant from $290,000 to have state and local partnerships develop school-to-work plans (DILHR et al., 1994: 9). The federal school-to-work legislation in 1994 encouraged Wisconsin to submit an application for a federal school-to-work implementation grant. This attempt was successful. Wisconsin received

a five-year implementation grant of 27 million dollars over the 1994-99 period (Bonderud & Bukolt, 1995: 5). In addition, two local school-to-work partnerships in Wisconsin directly received federal implementation grants of 1.1 million dollars (Bonderud & Bukolt, 1995: 4). While federal funds have thus been an important impetus for policy development in Wisconsin, it is important to note that these policies were already under way (long) before the School-to-Work Opportunities Act was passed in 1994. Beginning in 1987-88, Wisconsin school districts were required to provide access to an education for employment program to all students in grade Kindergarten through twelve (Bonderud & Bukolt, 1995, p. 2). This program should include basic skills instruction, school-supervised work experience, instruction in employability skills and attitudes, the study of economics, a one semester course providing careers exploration and planning, a vocational education program for pupils in grade 9 through 12, the establishment of a business-education partnership council, and the integration of other state standards and requirements.

Since then, Wisconsin has substantially expanded its policies in this area to its mid-nineties school-to-work policy. Most of the school-to work programs in Wisconsin (including its statewide youth apprenticeship program) were created through 1991 Wisconsin Act 39 (Bonderud & Bukolt, 1995: 3). Wisconsin Act 39 from 1993 requires school districts to have their education for employment programs incorporate applied curricula, guidance and counseling services, technical preparation, college preparation, youth apprenticeship or other job training and experience, and instruction in employment skills by the beginning of the 1997-98 school year (Bukolt & Toulmin, 1995: 14).

All these policies were developed before the federal School-to-Work Opportunities Act was passed in 1994, and before Wisconsin subsequently received a federal implementation grant. Of course, Wisconsin and other states had anticipated federal school-to-work legislation when they were developing these policies. Thus, federal policy debates had already influenced the development of school-to-work policies in Wisconsin before 1994. An example of this is the development of the Wisconsin youth apprenticeship program that would have been a federally approved pilot project if the federal Youth Apprenticeship Act of 1992 had been passed (section 4.5.2.1). And the fact that 75% of the 10.5 million in federal and state funds budgeted for Wisconsin school-to-work programs in 1994-95 has federal origins shows that the federal involvement is quite relevant (Bonderud & Bukolt, 1995: 4). And school-to-work implementation grants were not the only federal funds available for Wisconsin's school-to-work programs. For instance, the state received 21.2 million dollars in funds available through the federal Carl Perkins Act in 1994-95 for improving secondary, post-secondary and adult vocational programs. Of these funds, 2.1 million dollars were provided specifically for tech prep (Bonderud & Bukolt, 1995: 6). And the Department of Administration received $290,000 in 1994 for activities that build up local school-to-work partnerships through the federal Job

Training Partnership Act. Even earlier, the state received a three year grant from the federal Department of Education (DOE) under its Cooperative Demonstration Program (1993); and two Job Training 2000 grants from the federal Department of Labor (DOL) to build One-Stop Skill (Job) Centers that included a school-to-work transition component and a secondary school partner (DILHR et al., 1994: 8).

Wisconsin's Skills for the Future effort consists of five major components, which will be subsequently discussed: youth apprenticeship, local partnerships, career counseling centers, technical preparation (tech prep), and post-secondary enrollment options (DILHR et al., 1994; Bonderud & Bukolt, 1995).

#### 4.6.2.2 Youth apprenticeship

Wisconsin's youth apprenticeship program is probably the most notable part of its school-to- work policy. Wisconsin was the first American state to enact a Statute that called for a statewide system of youth apprenticeships in 1991 (DILHR et al., 1994). In 1992, the state received a $200,000 grant from DOL to develop and implement a youth apprenticeship program (DILHR et al., 1994: 8). The German Marshall Fund enabled key government, business and labor leaders from Wisconsin to visit Germany to study its apprenticeship training system – eight decades after the first Wisconsin VET expert went on such an official study trip there.

As in other states, some Wisconsin high schools had always offered forms of work-based learning, primarily in the form of cooperative education programs[29]. And of course, the state already had a Germany-inspired, 'adult' apprenticeship system (section 4.2.5). Youth apprenticeship tried to improve on cooperative education programs by prescribing a statewide curriculum for the school-based component, and by stimulating local partnerships between high schools, technical colleges, employers and unions. Thus, the training provided should be broader and of a higher quality. It tried to improve on adult apprenticeship by ensuring that it should ease the school-to-work transition for young adults, while adult apprenticeship mainly trains workers in their twenties and thirties (cf. section 4.2.5). Access to youth apprenticeship positions was restricted to 16-18 year olds. Only high school students could enter a youth apprenticeship position at the beginning of their junior year (11th grade), provided they had performed satisfactorily on the 10th grade gateway assessment (section 4.6.3.1).

Wisconsin's youth apprenticeship program consisted of two-year programs for high school juniors and seniors that combined academic classroom coursework in high schools or technical colleges with on-the-job training in individual firms (Bonderud & Bukolt, 1995: 9). The students spent at least ten hours a week with the firm during the first year, and at least fifteen hours during the second year. The rest of the time they took classes at their high school. The majority of these were regular high school classes in various topics. In addition, they were required to take

a specific related instruction class in the program area of their youth apprenticeship. This class was either provided by a technical college or by a high school. Students were required to maintain good standing in their school performances and complete the high school graduation requirements in time.

Specific youth apprenticeship programs were based on statewide skills standards for specific industries, and the curriculum for the school-based components was developed at the state level. Students that completed a youth apprenticeship received an occupational proficiency certificate from the state. This entitled them to advanced standing when they subsequently enrolled in related technical college programs. The exact number of credits they received depended on the program area and the individual technical college involved. Relevant standards and certificates will be further discussed in section 4.6.3.3.

Employers selected the apprentices from a number of applicants that were pre-selected by the participating high schools. They subsequently hired them through a training agreement that was signed by themselves, the high school and the youth apprentice's parents. This agreement lasted two years. Over this period, employers paid the apprentice at least the minimum wage, or a higher wage level agreed upon by the local youth apprenticeship consortium. Through these local consortia, they were eligible for a state training subsidy of up to 50% of the youth apprentice's hourly wage or $4 per hour.

At the local level, these consortia were responsible for the administration of youth apprenticeship programs. They were partnerships consisting of representatives from high schools, technical colleges, unions, employers, community members, parents and students. The exact make-up of these local steering committees varied, both as to the number of members and the parties represented; not every committee, for instance, had union involvement. Later, such committees typically fell under one comprehensive local School-to-Work committee that operated sub-committees for each local industry for which there is a youth apprenticeship program.

Wisconsin's youth apprenticeship program started in the printing industry in two school districts and with 17 youth apprentices in 1992. Gradually, it encompassed 625 youth apprentices with 475 employers in 13 program areas, with 99 programs offered at 43 local sites in 1995-96. 90 students graduated from the first two generations of students in two areas (printing and financial services).

The idea for youth apprenticeship originated in BAS, the agency within DILHR that administrates the adult apprenticeship system. Since then, the effort has been taken outside of BAS to be embedded in a broader school-to-work context. It was transferred to the Office of Workforce Excellence within DILHR (Bonderud & Bukolt, 1995). There was a statewide Youth Apprenticeship Council consisting of three vocational education instructors, three high school teachers, two business representatives, two union representatives, one administrator from a technical college and one from a high school. All members were appointed by the Governor.

The relation between youth apprenticeship and apprenticeship is a complicated one in the U.S., and Wisconsin is no exception. An important reason for this is that American union representatives have had serious concerns about the development of youth apprenticeship (Shenon, 1992). While supporting the general idea of developing substantial learning opportunities for the non-college bound half of American youth, they feared that youth apprenticeship might undermine the existing adult apprenticeship systems and, consequently, their position in governing these. Further, since youth apprentices provide cheap labor, they fear that firms will substitute them for adult workers. In general, the acceptability of low youth pay to adult union members rests upon effective institutional restraint upon employers to prevent such substitution (Marsden & Ryan, 1990a: 355), and such restraint is usually weak in the U.S. as compared with Germany.

In order to have unions widely embrace youth apprenticeship, it will have to be embedded in a broader strategy that also offers substantial training opportunities for incumbent workers. Thus, the fact that Wisconsin stepped up its activities in the field of worker training as early as the late eighties will have helped to level the field for youth apprenticeship. The Wisconsin AFL-CIO was involved in the development of the youth apprenticeship program, and the experience indicated a waning opposition from union ranks to youth apprenticeship over time. Even in the building trades, where opposition was strongest, the development of youth apprenticeship was being discussed.

Still, it is important to note that there was no connection at all between youth apprenticeship and adult apprenticeship programs at the time of the fieldwork. Youth apprenticeships could not be developed in the apprenticeable trades from the adult apprenticeship system. It was possible to develop youth apprenticeships for broader occupational areas, such as manufacturing/machining. Graduating youth apprentices were not entitled to any credit when they entered an adult apprenticeship in the same sector.

Youth apprenticeship was not the only new form of work-based learning that was promoted in Wisconsin's Skills for the Future effort. DPI developed a separate program: the Wisconsin school-to-work cooperative education skills standards certificate (in short, certified co-op) program (DPI, 1995a). Like youth apprenticeship, certified co-op tried to improve on traditional co-op through the incorporation of statewide skill standards. The program basically mirrored the youth apprenticeship program. Students combined related classroom instruction with paid work-experience with an employer, with whom they (and their parents and the school) signed a cooperative education agreement. The work-based component averaged 15 hours a week, with a minimum of 480 hours throughout the year. The most important difference with youth apprenticeship was that certified co-op programs only last one year, which begs the question why they were not simply one-year youth apprenticeship programs. The program enrolled its first students in 1995-96, in three program areas. These are

other program areas than those where youth apprenticeship has been developed.

In 1995, 1,600 high school students were enrolled in either form of work-based learning governed by statewide skill standards, which means that enrollment in the certified co-op program was a little higher than in youth apprenticeship. These 1,600 students worked with 850 employers in 16 program areas and 215 programs at 110 local sites.

#### 4.6.2.3 Local partnerships

Besides youth apprenticeship, the creation of local school-to-work partnerships was an important strategic policy. These partnerships could include secondary schools, WTCS districts, Private Industry Councils, local Chambers of Commerce and other groups (Bonderud & Bukolt, 1995: 7). These local partnerships had to establish a school-to-work program that met the federal requirements and includes school-based learning, work-based learning and connecting activities. They received a subsidy that covered 100% of expenses during the first year, 50% in the second year and 25% in the third year. After that, partnerships only received money for each youth apprentice ($400) and certified co-op student ($200).

#### 4.6.2.4 Career centers

A third part of the Skills for the Future project was the development of a number of career centers that would provide excellent career orientation and counseling for young people. As early as 1987, Wisconsin had developed a statewide network of Job Centers to coordinate all employment and training services (NCEE, 1995). But these were geared to serving an adult population, and not specifically to career counseling for young persons. The need for the latter was established when the state found out that high school counselors actually spend very little time on career counseling. Their strength is in counseling on college careers, not on direct labor market transition. In 1994, Wisconsin received a federal one-stop center implementation grant to expand and upgrade the centers (NCEE, 195: 49).

Wisconsin used the money to develop a limited number of so-called career centers. The idea for these career centers was inspired by the example of the German 'Berufsinformationszentren' (section 3.6.1). The first four career centers started operating in the fall of the 1994 school year. They received declining state funding for three years, the total sum of which had to be matched by local funding. After these three years, the centers were to be completely funded through local sources. They offered comprehensive career development programs that guide clients through a series of self-learning steps: career awareness, career assessment, exploration, selection and application. The number of centers rapidly grew to eight.

In practice, the eight centers came to represent quite different approaches to

career guidance. Among the organizations that created them were a school district, a CESA, a Private Industry Council, a Chamber of Commerce and a technical college. Mostly these organizations represent wider community partnerships. One center was located in a large inner city and hosted groups of 8th and 10th graders of local schools. Another center was integrated with a Job Center, located in a technical college and served mainly adults. A third career center covered a large rural area and therefore ran a 'roadshow' and distance learning TV programs. And a fourth had no physical but only a digital presence (Bonderud & Bukolt, 1995: 13).

#### 4.6.2.5 Tech prep

Nationally, the term tech prep usually refers to vocational programs that link the last two years of high school with the two years of two-year college education, and which exist as separate tracks alongside college preparatory tracks. This is different in Wisconsin. The state decided that separate tech prep tracks were not desirable, since tech prep would offer benefits to all students. Moreover, tech prep does not always conform to the 2 + 2 model.

In Wisconsin, tech prep is a statewide effort that exists in all school districts (DILHR et al., 1994: 5). The development of tech prep programs in Wisconsin started in the early nineties. The federal Carl Perkins Act supplied funds for tech prep from 1991-92 onwards. Wisconsin Act 39 required school boards to establish a tech prep program in each high school in the district (Bonderud & Bukolt, 1995: 13). Wisconsin organized 16 School-to-Work/Tech Prep consortia in which a technical college teamed up with all K-12 districts within the technical college district boundaries to implement the programs. Together, the consortia established a tech prep leadership group to provide leadership (Bonderud & Bukolt, 1995: 14).

The programs must consist of a sequence of courses that allows high school students to gain advanced standing in associate degree programs upon high school graduation. An agreement between a technical college and a high school that enables such transfer of credit was called an articulation agreement. The possibility to develop such agreements was not new, but it had been used only little before. Individual high schools and technical colleges negotiated over 3,000 articulation agreements that enabled high school students to transfer from three to twenty (technical college) credits to a technical college program. As of July 1994 the WTCS Board had to approve courses for tech prep programs (Bonderud & Bukolt, 1995: 15). The state was hoping to achieve statewide articulation agreements in the future. Other activities, such as teacher and counselor training and preparatory services, were also included in tech prep programs.

#### 4.6.2.6 Post-secondary enrollment options

The 1991 Wisconsin Post-secondary Enrollment Options Act grants 11th and 12th grade students the opportunity to enroll in post-secondary programs at technical colleges, UW campuses or private post-secondary institutions if their own high school doesn't offer training in a particular area they are interested in (Bonderud & Bukolt, 1995: 16). This possibility already existed, but few students used the opportunity, in part due to cumbersome administrative procedures involved.
With this option, the school reimbursed the college for the program, and students received high school credit. They were admitted to the technical college courses only if space was available and if they met the college's admission standards. School boards determined if a given course was eligible for high school credit, and whether the district itself offered a comparable course. If enrollment in a particular post-secondary course equaled the enrollment normally required for a district to provide a course itself, and a similar enrollment was expected for the next year, the district is required to offer the course itself in the future. With an enrollment of 547 at the UW and WTCS in 1994-95, the program was still modest in size (Bonderud & Bukolt, 1995: 19)

#### 4.6.2.7 Involvement of the UW in school-to-work

In addition to these five prime policy areas, an interesting characteristic of the Skills for the Future project was the cooperation of the UW. It is involved in two ways (Bonderud & Bukolt, 1995: 3). First, individual UW campuses and WTCS districts are negotiating articulation agreements to facilitate the transfer of credits between them.

The second kind of university involvement in school-to-work is quite exceptional across the U.S.. The UW was the first university system in the country to develop an alternative competency-based admissions procedure for those students that have been enrolled in school-to-work programs in high school. It was not possible to adequately assess the performance and capabilities of students in some school-to-work programs (e.g. youth apprenticeship) within the limits of the standard admission procedure. Thus, it was necessary to develop an alternative procedure to allow college-bound students to participate in such programs without damaging their chances on admittance to a (prestigious) four-year college. The competency-based admissions process was implemented as a pilot project with eight Wisconsin high schools and all UW colleges in the 1995-96 school year, and continued with a second round of pilot projects in the 1996-1997 school year (UW, 1995b).

#### 4.6.2.8 Governance structure for 'Skills for the Future'

One of the problems with the governance of American VET was that it was scattered over various systems. Wisconsin is no exception, and as a consequence school-to-work programs have affected various state departments and agencies. To combat this problem, Wisconsin made sure to use its school-to-work effort to improve coordination among the state departments and agencies concerned. First, the Governor installed a Cabinet for a Quality Workforce, which functioned as a coordinating body in this field from 1991 to 1993 (Bonderud & Bukolt, 1995). In 1993, the Department of Administration briefly provided supervision. And from 1993 onwards, the Office of Workforce Excellence was created in DILHR to be the central coordinating body.

The individual programs, however, were still administered by individual agencies and departments. Each of those agencies devoted some of its staff or even an entire unit to developing and implementing school-to-work policy. Besides DILHR, DPI (with its own Office of School-to-Work) and the WTCS Board were the dominant agencies in the Skills for the Future project. But the Department of Administration, the UW and the Department of Health and Social Services were also involved. Staff of these agencies met every week in a ten-member school-to-work policy team (DILHR et al., 1995: 5). This team constituted several more focused teams from their ranks, such as a skills standards development team and a work-based learning team. At a higher level, the state superintendent for public instruction, the WTCS director and the Secretary of DILHR formed the School-to-Work Cabinet. And above that, the state was creating a Council for Workforce Excellence consisting of representatives of public agencies, business and organized labor. This new council would take over the work of the Youth Apprenticeship Council, but also be responsible for other school-to-work programs.

### 4.6.3 Skills standards and assessment in Wisconsin

#### 4.6.3.1 Introduction

Wisconsin has also seen some initiatives to develop or strengthen skills standards for VET. But these were generally less developed than the aforementioned policies regarding academic standards. Neither do these aim for one overarching qualification structure of skills standards that govern all VET. Instead, skills standards are debated separately for the three most important systems that provide VET: the K-12 system, the apprenticeship system, and the (technical diploma and associate degrees programs of) WTCS. Such skills standards were also not connected to independent statewide assessment procedures, either.

#### 4.6.3.2 Skills standards in the K-12 system

In the K-12 system, the development of skills standards has been integrated with the development of new work-based learning programs. Wisconsin's application for a federal school-to-work implementation grant promised the approval of skills standards by the Youth Apprenticeship Advisory Council for thirty industries by 2000, and for fifty by 2010 (DILHR et al., 1994: 57). Such skills standards were developed within two different work-based learning programs for high school students: youth apprenticeship and certified co-op. Both programs were governed by statewide skills standards and led to skills certificates recognized by the state. Jointly, they covered 16 industries in the 1995-96 school year.

The youth apprenticeship program was described in section 4.6.2.2. It was governed by statewide skills standards or, to be more precise, by a statewide curriculum. The curriculum covered both the school- and work-based component of the programs. It did not specify the roles of employers and schools; only in one area did the curriculum suggest a division of tasks between both parties. The curricula were based on a task-analysis by experts, written by technical college instructors or sometimes high school teachers, and reviewed by a review committee again consisting primarily of technical college instructors and high school teachers. Involving employers in the latter proved difficult because of the time-consuming character of the task. The plan was to revise the curricula once every three years, by having the original authors write a new version and have training companies comment on it.

There was no final examination that youth apprentices had to pass. There was a checklist of required workplace competencies in the curricula, which firm mentors had to use in regularly assessing their apprentices' progress, and checking off competencies they had attained. Both the high school teacher and the firm mentor assessed the progress of each youth apprentice each semester, and this added up to their final results. When the apprentices had mastered the required competencies, they were rewarded a certification portfolio.

Wisconsin tried to align its youth apprenticeship curricula with national skills standards whenever these became available - which they typically were not at the time of curriculum development. The national skills standards in machining were, however, used as a source in the development of the manufacturing/machining curriculum. But NIMS had, at the time of the fieldwork, not recognized Wisconsin as one of its implementation sites.

Second, the certified co-op program was also governed by statewide skill standards - but not by statewide curricula. Employers and frontline workers from a specific industry identified and categorized the necessary skills. The subsequent listing of competencies was validated by additional employers and secondary and post-secondary educators, upon which DPI approved them (DPI, 1995a: 3-4). This

served as a basis upon which individualized learning plans were developed (DPI. 1995a: 7). Firm mentors had to assess the students' performance on-the-job. Students could achieve three scores on each of the proficiencies: 3 (proficient), 2 (intermediate) or 1 (introductory). They had to score 2 or 3 on at least 90% of them to be eligible for the state certificate (DPI, 1995a: 4). Students obviously got high school credit for the program.

In 1995-96, some 1,600 students were enrolled in either a certified co-op or youth apprenticeship program, and thus covered by statewide skill standards (cf. section 4.6.2.2). Since some high schools simultaneously use the curriculum of such a work-based program as their new school-based VET program in that field, these standards in practice covered training for more students.

#### 4.6.3.3 Skills standards in the apprenticeship system

As for (adult) apprenticeship, BAS has the authority to adopt statewide standards covering minimum training requirements, procedures in processing indentures, qualifications of applicant employers and apprentices, and other matters (Wisconsin Administrative Code Ind. 95.01).

In the construction sector, most apprenticeship programs operate under state standards for the occupation concerned (BAS, 1987). These standards were developed through state Joint Apprenticeship Committees (state JACS). State JACs were first established by statewide employers and labor associations in the building trades in the 1930s (BAS, 1987). Like the area JACs, state JACs are merely advisory bodies to BAS. When BAS sees a need for a state JAC, it first determines which organizations there are that represent employers and employees in the segment of the labor market concerned. When these are willing to sit down and work out statewide apprenticeship standards, they are asked to nominate representatives on a state JAC. BAS finally designates an equal number of employers and employee representatives to be appointed to the state JAC, which then is established as an advisory body to both BAS and the WTCS Board. The committee proceeds to draw up a set of standards for the trade classification within their industry, and advises the WTCS on the industry needs for related instruction. The committee submits the standards to BAS, which has to adopt them. If it does, all area standards set by local JACs and all indentures have to meet the minimum of these state standards. Most of the apprenticeship programs in the building trades operate under both state and area standards (BAS, 1987).

These state standards concern the general governance of apprenticeship in the occupation, and discuss various topics such as minimum qualifications of applicants, conditions of work, appeal procedure, minimum apprentice wage, and related school attendance. Minimum *skills* standards, however, have only been contained in a limited way. The standards documents contained so-called 'Exhibit A's' for the

various occupations concerned. These contained a one page 'Schedule of processes to be worked'. This schedule listed a limited number of on-the-job work processes, and for each a 'recommended and approximate' number of hours that must be dedicated to work or carrying out this task. The Wisconsin Apprenticeship Law states that the work assignments of the employer must allow an apprentice to gain a comprehensive knowledge of the trade, and that the apprentice must show competency in all the skills of the trade at the end of his apprenticeship (BAS, 1992). But the minimum on-the-job work processes did not define a certain level of competence that is necessary for graduation. Neither was there some form of examination that by default would do the same. It was left to the discretion of the area JAC whether apprentices who had served their time had acquired the necessary level of competence. All in all, this left individual training firms more leverage in defining their training programs than is the case in either Germany or the Netherlands.

This was even more true outside the construction sector. There, programs were generally not covered by state standards (BAS, 1987), nor were there area JACs whose monitoring of training quality could at least establish some informal minimum level. The only provision that slightly limited individual firms' leverage in determining the contents of training in industry and service is that they needed formal approval of the standards they proposed themselves from BAS (BAS, 1987).

For related instruction, statewide standards should apply for trades in which apprentices are employed in more than one area of the state. They must provide the same basic related instruction curriculum, meaning that at least 2/3 of the school-based curriculum should be similar across technical colleges (BAS, 1987). This basic material was typically developed by a state advisory committee. However, spokesmen from the metalworking sector indicated that so far each technical college pretty much developed its own program, and that there thus was little standardization across the state. When apprentices in a certain trade were only employed in one part of the state, the technical college had to include the employer(s) and (if applicable) the union in the curriculum development, and coordinate this with BAS (BAS, 1987).

To sum up, Wisconsin apprenticeship was still primarily time-based by the mid-nineties, as opposed to the Dutch and German apprenticeship systems. The latter are competency based through the combined use of national skills standards and final examinations. Outside construction, the firm-specific character of the programs causes additional differences in training content. First, there are relatively many separate apprenticeable occupations in an area like metalworking. Second, even within one apprenticeable occupation such as machinist, there are several different 'Exhibit A's' being used by different firms throughout the state.

Because the apprenticeable trades in the U.S. trained to a higher standard than the newly developed national skills standards, the latter did not have direct

consequences for the Wisconsin apprenticeship system. The federal debate on youth apprenticeship and skills standards did, however, inspire some reform efforts there.

First, BAS was in the process of creating state JACs (now called state apprenticeable trade committees) for all trades – where they previously only existed in the construction sector. These state apprenticeable trade advisory committees were to develop statewide standards for their apprenticeable occupations (BAS, 1993). Nominations for employer representatives were sought from employers' associations or from employers that train apprentices, and for employee representatives from unions, in-plant local committees or (if these are lacking) from employers. The intention was to have fair representation coming from all over the state. In November 1995, there were twenty state apprenticeable trade committees, covering all of the building trades and a large majority of the trades in the industry and service sector. Some of them covered only one apprenticeable occupation, but others covered more, as another goal of this policy was to stimulate coordination between related trades, and if possible achieve a reduction of their number. These committees have the following responsibilities (BAS, 1993):

- to advise BAS on policy and program changes in the trade;
- to formulate minimum state standards for the trade and review them every five years; these standards should include the period of training, minimum work process requirements, related instruction, probation, requirements for training companies, journeyman/apprentice ratios, apprentice reviews and apprentice selections processes;
- to recommend related instruction and delivery service requirements;
- to prepare a policy on proficiency assessment/testing to be utilized by local committees in determining apprenticeship credit for previous experience/ education;
- to review and monitor local committee operations;
- to prepare an apprenticeship layoff/transfer policy and procedures and assist area committees in its use;
- to assist local committees;
- to assume statewide leadership for the purpose of improving conditions and expanding the number of employers using apprentices in the trade.

In addition, BAS policy has tried to move Wisconsin apprenticeship in a more competency-based direction (BAS, 1993). One part of their policy was to establish minimum core competencies for related instruction in the various trades. To facilitate this, the State of Wisconsin almost tripled its categorical aid to technical college districts for apprenticeship curriculum development in 1994-95 (Bukolt, 1995a: 15). But newly developed state standards that govern the work-based component of training still did not specify minimum levels of competency (i.e. BAS, 1995), nor were they expected to do so in the near future.

#### 4.6.3.4 Skills standards for the WTCS

Finally, we will turn to the school-based vocational programs offered at the technical colleges. There were no statewide skill standards documents that govern these programs. But the WTCS Board had the formal task to authorize programs offered at individual technical colleges, which should provide some statewide standardization (WTCS, 1995e). The WTCS Board needed to approve all associate degree and one- and two-year technical diploma programs, and needed to ratify the WTCS State Director's approval for less-than-one-year technical diploma programs and apprenticeship programs.

Individual colleges that wanted to start a new program submitted a needs assessment plan to the WTCS Board. This included the specific occupational area and the tentative program description. On this basis, the college could get permission to conduct a program investigation, whose purpose is establishing the need for the program. When the program at hand was a replication of a program already offered in one or more of the other districts, it had to contain information on those. The WTCS board subsequently based its decision on the material gathered in this procedure. If a program had been approved, the technical college had to submit a program implementation proposal that established the curriculum and verified the allocation of resources (WTCS, 1995e).

Throughout the process, the technical college's advisory committee for the program area concerned played an important role. These committees consisted of employer and employee representatives from area firms to which the programs catered. In all they had nine to fifteen members that had been invited by the college. They advised on the program's budget, curriculum and equipment.

In practice, it was difficult for the WTCS Board to reject proposals or (even more so) existing programs. The main reason for this is that the colleges are primarily supported through local funding, and that support for the proposal from local industry was by definition implied by the local advisory committee's supporting role in the process. Furthermore, once programs had been approved, they subsequently would change over time. Substantial program changes were considered program modifications and required state board approval. But when individual colleges wanted to change a small part of an existing program they only needed approval for the new course(s) from the state board. The snowball effect of such changes over some years could cause substantial shifts in programs. Consequently, similar programs at different colleges have tended to differ in their contents.

Over the years a number of districts with similar programs have worked together to identify common occupational competencies. These were validated by industry, and were subsequently used to build core courses for the programs. Such core curricula were developed for areas like electronics, marketing, administrative assistance and mechanical design. The development of national skills standards and

of state skills standards for youth apprenticeship and certified cooperative education created additional pressure for creating such statewide, industry-validated core curricula. Statewide curriculum projects were under way in several program areas and planned for the near future for others (e.g. machining).

As for direct consequences of national skills standards developed by the DOL and DOE pilot projects, the WTCS-system was at the time of the field work considering two policy options. The first was the development of a new external board with subcommittees, such as have been developed in states like Illinois (Occupational Skills Standards and Credentialing Council), Indiana (Workforce Proficiency Council) and Texas (Texas Skills Standards Board). But the most probable option was that the WTCS Board and the existing advisory committees within the system would check whether WTCS programs would rally with the national standards. Individual colleges were already beginning to utilize specific sets of national standards as these were released, to examine their programs and see how they compared to these standards. A number of colleges have volunteered to be pilot sites for the implementation of the NIMS machining standards.

### 4.6.4 The Wisconsin Regional Training Partnership

An important autonomous development in Wisconsin was the creation of a jointly managed consortium established by a number of metalworking firms and unions in the Milwaukee area: the Wisconsin Regional Training Partnership (WRTP). It had about two dozen members: firms concentrated in metalworking, electronics and related durable goods manufacturing (Rogers & Parker, 1995; Neuenfeldt & Parker, 1996). They ranged in size from 100 to 3,000 employees, and together employed about 30,000 people. These workers were represented by the IAMAW, USWA, UAW, the United Paperworkers International Union, the Electrical Workers and other industrial unions. The WRTP was governed by an executive council that consisted of an equal number of representatives from labor, management and the public sector. The latter included Wisconsin's Secretary of Labor, and directors of area technical colleges and area private industry councils.

The consortium's goal was to support high performance workplaces and family-supporting jobs in the area. The WRTP was formed at the end of 1992 to (Rogers & Parker, 1995: 2):

> "effectively organize a region-wide social compact - firms support the regional economy by investing in worker training, paying good wages and reorganizing production so as to take advantage of greater workforce capabilities; workers and unions develop the skills and accept the responsibility and authority which high performance production systems demand of them; and public agencies support the shop floor bargaining by coordinating training and manufacturing extension

> efforts and by assisting in the creation of a regional infrastructure to broaden and institutionalize the effort."

Members of the WRTP were committed to:

- jointly administering workplace education and training programs;
- increasing human resource budgets relative to employment levels;
- expanding future workforce programs for unemployed adults and youth;
- benchmarking incumbent and future workforce training to advanced practices;
- developing partnership approaches to supplier network assistance.

The WRTP offered its members the opportunity to learn from each other's experiences, to identify and develop model programs for shared problems, and to receive assistance in locating public sector resources that could address their needs. The WRTP activities included improving labor-management relations, workplace education and training, school-to-work transition, re-employment assistance for dislocated workers, and developing industry skills standards and manufacturing extension programs. As for the WRTP involvement in school-to-work, the consortium played a crucial role in the creation of a youth apprenticeship for manufacturing/ machining and in developing its statewide curriculum.

But long before the WRTP embarked on training for young people, its roots were laid by an initiative to stimulate incumbent worker training. In the eighties, the Wisconsin AFL-CIO began to encourage the development of workplace education centers in firms. These centers were to provide basic skills and literacy training for the firm's incumbent workers. The Wisconsin government launched a program (with the help of a DOE grant) to encourage firms to adopt such centers (Rogers & Parker, 1995; NCEE, 1995; Neuenfeldt & Parker, 1996). The program provided matching grants to firms that started such centers for three years. Firms received funds to cover a declining share of the costs over this period (75, 50 and 25%). After those three years it was hoped that firms would continue on their own. Many did, and have even expanded the centers, both as to the number of employees they serve and the kinds of training offered. Building on the previously acquired basic skills, some firms embarked on technical training. Some firms for instance purchased a CNC-miniature machining tool to train their workers. Over the years, more than 100 workplace education centers were set up in Wisconsin (Neuenfeldt & Parker, 1996).

Entrance barriers to such workplace education centers were low, which seems the most important reason for their success. The facility was open to all workers that wanted to improve their skills. Precise regulations varied per firm, but typically workers could spend some time there during working hours. They could use books, videotapes and computer programs for self-learning, or sign-up for customized

courses. The centers had an independent instructor, usually from a technical college. His or her independence meant that workers did not have to fear that revealing skills deficiencies would have consequences for managerial decisions concerning them. The centers were operated by joint labor-management steering committees, which provided a further reassurance to workers. These committees in turn established peer advisor networks to ensure that workers could gain information on the centers from a direct colleague, while the committee was informed on workers' ideas about the center. 10% of the production workforce of seventeen WRTP member firms participated in such centers for over one year (Neuenfeldt & Parker, 1996).

The WRTP was certainly not the only new partnership in the State of Wisconsin that dealt with training issues. Section 4.6.2.3 pointed out that creating local partnerships is at the heart of Wisconsin's school-to-work policy. But a crucial difference between these partnerships and the WRTP was that, while the former confined themselves to future worker training, the latter dealt with incumbent worker training, future worker training and other related issues in the same firms at the same time. It was exactly the combination of these issues that gave the WRTP an edge over school-to-work partnerships.

On the one hand, we saw that the functioning of internal labor markets has been an important cause for the cumbersome school-to-work transition for many American youngsters (section 4.4). School-to-work policies could only be really successful if they could change the operation of such markets. Firms cannot suddenly adopt high performance workplaces when the only skills upgrade to their workforce is a limited number of newly recruited well-trained school-leavers. Their incumbent workforce will need similar skills, since they have to operate in the same workplaces, and most of them will need further training to acquire these. Furthermore, if firms invested heavily in youth training but not in training for their incumbent workforce, the danger is that new recruits would occupy advanced positions in those markets at the cost of those incumbent workers. The equal involvement of firms and unions in the WRTP implies a better safeguard of those incumbent workers' rights than school-to-work partnerships, where unions tend to occupy a minor position, and where incumbent worker training issues are not on the agenda. And when incumbent workers feel secure, management will face a much easier task in implementing the changes to the workplaces they consider necessary. Thus (Neuenfeldt & Parker, 1996):

> "The WRTP is designed to provide the necessary institutional support for extending this new bargain between labor and management thought manufacturing."

## 4.7 Conclusion: American reform policies between a rock and a hard place

Both at the federal level and in the state in Wisconsin, VET reform policies in the early nineteen nineties aimed to strengthen certain institutional aspects that are key strengths of the German apprenticeship system such as:

- work-based learning and youth apprenticeship
- skill standards systems
- career centers for vocational guidance
- partnerships.

American VET reforms at the time originated as small but focused programs to experiment with specific institutional models such as youth apprenticeship and national occupational skills standards. Later, they evolved into much more comprehensive but less focused programs. This particularly applied to federal school-to-work policies. These eventually did not aim for a specific national school-to-work transition model, but were designed to enable states to develop their own systems, within very broad limits. They permitted a wide variation in interpretation and adaptation to local needs and circumstances (NCEE, 1995). In addition, the federal school-to-work legislation was written to provide great flexibility not only to state governments, but also to people at the local level of governance. While this aspect has significantly contributed to getting the legislation passed, it may undermine the policy goals when it comes to implementation (Tucker, 1994a: 7). The state and federal funds available for school-to-work policies were just seed money to trigger fundamental changes in the standard operating procedures of schools and companies. The danger was that (Tucker, 1994a: 15):

> "School-to-work transition easily could become another marginal program added to all the others, a vaguely defined collection of activities, each of which serves only a handful of students, mostly perceived as alternative programs for youngsters who do not fit in elsewhere."

As for the national skills standards policies, these became not so much less focused, but rather their focus seemed to shift. The goal of developing national skills standards as a specific mechanism to improve transparency and accountability of VET programs gradually took a back seat to the goal of stimulating the development of high-performance workplaces. These two goals are connected. Only if firms abandon low-skills strategies and adopt high-skills ones will their qualification requirements for new recruits rise. Only then will they be inclined to actually use national skills standards in their recruitment procedures. And only then will individual schools be forced to use those standards as benchmarks for their own vocational programs. As long as the demand side of the (youth) labor market fails to sufficiently demand

and use high skills of young workers, improvements on the institutionalization of the supply of VET will be in vain (cf. NCEE, 1995, and section 4.4). But at the same time, we have learned from our analysis from the German high-skill equilibrium that the availability of well-trained young generation of VET graduates with reliable and comparable VET credentials makes it easier for firms to opt for high-skills strategies. The experiences of the DOE and DOL pilot projects showed that it is difficult enough to develop national skills standards and promote them with government support in a country that essentially lacks such a tradition. With limited funds, the NSSB could in effect only finance a limited set of additional pilot projects. Its careful policy may have been very prudent in the American context of an educational system that has always been very decentralized. But it could not fill the skills standards gap in American VET systems for the foreseeable future.

American VET reform thus never came close developing a comprehensive German-style VET system that some (e.g. Hamilton, 1990) called for. This gives these American VET reform efforts a somewhat paradoxical character. One the hand, reforms tried to strengthen German-style institutions to help improve the operation of their market for intermediate skills. On the other, the reform ambitions stopped well short of building a comprehensive system of regulated work-based learning. Our previous analysis of German apprenticeship has shown that the fact that German apprenticeship system has a near monopoly on VET in the German youth labor market is an important factor in its success. The fact that most firms train their apprentices creates a potential 'lemon' problem for those who would try to opt out of their own training efforts; and the fact that future skilled workers to an important extent enter German firms as an apprentice continues to make it attractive for German youth to opt for such an apprenticeship. In order to generate the necessary support and commitment, American reform efforts understandably focused on 'room to maneuver' for local actors in choosing their own strategies. The floundering existence of adult apprenticeship in the State of Wisconsin for almost a century, that despite similar legal roots as German apprenticeship does not generate much work-based training, serves as an important warning that just copying such institutions by itself is not enough to achieve similar results (cf. section 4.4.2). Firms' strategies are vital to the outcome in markets for intermediate skills. And to the extent that American school-to-work policies (with some exception of some of the skills standards efforts) did not explicitly target firms' labor market strategies themselves, major changes in the type of skill equilibrium seem unlikely. In this sense, the example of the WRTP offered an interesting additional policy avenue as it started from the firms' needs and strategies, and linked to school-to-work policies from there (section 4.6.4).

The development of industry-wide coordinated VET systems in the U.S. is severely hampered by a number of characteristics of the American industrial relations system (section cf. 4.3):

- First and foremost, the prevalence of non-union firms that (by definition) are not covered by collective bargaining agreements severely complicates the coordination of worker and employer interests in sectors;
- Second, the decentralized character of collective bargaining, which occurs predominantly at firm level, makes it difficult to achieve such coordination even among unionized firms within a certain sector. It is no coincidence that the highest level of sectoral coordination has been achieved in unionized construction where there is some tradition of multi-employer collective bargaining agreements;
- Third, the relative underdevelopment of employers' associations in the U.S. also makes them, due to their lack of tasks in collective bargaining, less capable of acting as accepted representatives of an entire sector to validate skills standards or assessment tests[30]. And it makes them less of a factor to discourage poaching strategies by individual firms.
- Fourth, for unionized manufacturing, the basis for an industry-wide coordinated training strategy is further eroded by the fact that unions are not organized along clear sectoral or craft lines. Workers in similar firms and similar occupations are organized by several unions (cf. section 4.3.3). The decentralized organization of American manufacturing labor has undoubtedly contributed to the flourishing of American-style internal labor markets in the U.S. It also provides for a clear contrast with the building trades in the U.S., where unions are distinguished along craft lines. There, one union represents all unionized workers in the same craft, and provides the basis for a truly occupational labor market;
- Fifth, the traditional strategy of American industrial unions to stay clear of production control at firm level (Rogers, 1995) has long implied their neglect of firms' training policies as an important area for a strategic union policy;
- Sixth, the craft nature of American construction unions has made unionized construction firms very vulnerable to low-wage competition from non-union competitors. The unintended consequence of this has been an erosion of the union share in sectoral production and, consequently, of the union-dominated apprenticeship systems.

In addition, the decentralized nature of American education provides another formidable obstacle. The federal government can only indirectly influence VET by funding specific policy programs and pilot projects. State governments have more direct regulatory powers. But the example of Wisconsin shows that even within one state, the various publicly funded educational institutions (not to mention the private ones) have tended to operate with considerable autonomy and at considerable distance from one another. There has been no comprehensive

Department of Education to coordinate their development as in the Netherlands or in German states. In addition, individual schools and colleges within the various public systems have considerable autonomy. While such autonomy may be quite welcome in many areas, in the U.S. it extends to areas where some constraints on that autonomy seem welcome. National or statewide academic and skills standards and assessment procedures are prime examples.

Rather than look to Germany as inspiration for American VET reform, others have thus pointed at the Japanese example. Just as in the U.S., vocational training in Japan is largely something for individual firms to embark on, but (contrary to the U.S.) Japanese firms have been delivering rather broadly based training for their workforce (Sako, 1991). However, as Marsden & Ryan (1991a; 1991b) point out, the American labor market has historically also lacked the culture of lifetime employment that ensures that the profits of training investments will be reaped by the current Japanese employer. To envision American firms fundamentally altering their inclination to numerical flexibility and 'hire and fire' seems at least as bold an expectation as to picture more coordination through collective action.

What Germany and the Japan have in common is that their major firms share an action orientation, a conception of a control, in which their own training investments in their workers are key to these firms' strategies And this creates a feedback effect that stimulates other firms as well as youth to also invest in training. Any state will have a hard time trying to move its own business community in a similar direction, particularly as it is not as if firms training strategies were an intended consequence of state intervention there. And the American government faces an even steeper challenge than most other states because of the aforementioned barriers.

## Notes chapter 4

[1] Credits are the units used to measure the size of a course in American education. However, since there are different credit systems in use, one credit does not always denote the same workload. In the Wisconsin K-12 system, one credit typically corresponds to a course that meets each day for one period of 45 to 55 minutes, for up to 180 school days (DPI, 1995b: 28). In Wisconsin's technical college system, a two-year associate degree program consists of 64 to 72 credits.
[2] The name 'less-than-four-year colleges' would actually be more precise, since some of them are three-year colleges (NCES, 1994: 66). Since the latter are the exception throughout the U.S., and completely lacking in Wisconsin, we will stick to the conventional and shorter-term 'two-year colleges'.
[3] Wisconsin is one of sixteen American states that has a chief state school officer that is elected by the population (Chubb & Moe, 1990: 279). It is the only state that does not have an elected or appointed state board of education next to that chief state school officer.
[4] Thus, the only choice students and their parents have is between one public school and (much more expensive) private schools. The exception where choice among public schools was possible has been the Milwaukee school district. To avoid racial segregation, the district created so-called specialty schools. Such schools have a designated number of seats in one or more specialty areas, for which parents from other neighborhoods can apply. These specialty areas can be vocational as well as academic. In the mid nineties, all Milwaukee public high schools were so-called city-wide high schools, which means that students from throughout the city can apply for admittance. Since 1989, Milwaukee has been experimenting with public subsidization of private school attendance by Milwaukee children from poor families through the Milwaukee Parental Choice Program (Toulmin, 1995).
[5] In addition, there are two separate state schools, one for the deaf and one for the visually handicapped (DPI, 1995b).
[6] Wisconsin has one very large school district (Milwaukee) that accounts for 11.4% of all public school enrollments in 1992-93, and thus significantly raises the statewide average (Snyder & Hoffman, 1995: 75).
[7] In addition, there are three smaller types of general state aid (Toulmin & Bukolt, 1995: 14).
[8] Cf. Bukolt & Toulmin (1995) for an overview.
[9] Prior to 1994, the system was called Vocational, Technical and Adult Education (VTAE) System. Besides the 16 technical colleges in this system, Wisconsin currently has two community colleges of a new type (WLRB, 1995: 641). These are supported exclusively by local public funding. Together, they enrolled 676 students in fall 1994. Because of their very small size, they are not further discussed in this report.
[10] Cf. Bauer (1991: 4-6) for an overview of the division of various responsibilities between the individual district boards and the state board. In section 4.6, we will address the responsibilities for the development and modification of WTCS.
[11] In addition, districts can issue a debt levy, for instance to finance building projects (Bukolt, 1995a: 9).
[12] Students from other states pay considerably higher tuition fees, unless there is a specific arrangement between the two states concerned. At that time, Minnesota residents could attend any Wisconsin technical college and pay the same tuition as Wisconsin residents (and vice versa). Similar arrangements existed between the three northern WTCS districts and two community colleges in bordering Michigan's Upper Peninsula; and between three Wisconsin technical college districts and some community colleges in Illinois (Bukolt, 1995a: 28-29).
[13] Cf. Van Lieshout (1996b: 23-36) for a more detailed analysis of Wisconsin apprenticeship and its governance.
[14] Technical colleges also offer some pre-apprenticeship programs that can serve as

a gateway into apprenticeship. Students can transfer credits from the former to the latter's related instruction component.

[15] Cf. BAS (1987) and Van Lieshout (1996b: 27) for an extensive overview of the particular task area JACs may fulfill.

[16] The other four are barbering, cosmetology, sprinkler fitting and funeral directing.

[17] Sometimes workers of a plant or firm are represented by more than one union.

[18] Some unions (for instance the International Association of Machinists and Aerospace Workers) also organize workers in Canada.

[19] No labor market can function adequately if each and every entry-level position could exclusively be offered as an apprenticeship position. This is even more true in a sector where production fluctuates as heavily as it does in construction. Thus, it has been possible (in times when the supply of journeymen fell short of demand) to buy a journeyman card from a union upon demonstration of experience in the trade. If the applicant's skills are found to be deficient, he can be trained as a so-called apprentice-improver. He then receives a wage higher than a starting apprentice does, but lower than a journeyman does.

[20] ABC does not have a monopoly on organizing non-union construction firms. Associated General Contractors (AGC), the employers' association with which construction unions do most of their business, organizes besides unionized contractors also non-union contractors. The latter appear to be the occasional non-union contractors that participate in JAC apprenticeships. On the other hand, ABC itself is not exclusively non-union. Approximately 5% of ABC members in Wisconsin are unionized.

[21] For instance, an NTMA chapter in Wisconsin has a training committee where employers discuss training issues; it provides access to materials such as training videos and apprentice logbooks that are developed by its national organization; and it has itself produced a promotion video for the industry.

[22] Keltner (1995) observes on the basis of a German-American comparison of the banking sector that the extensive vertical differentiation of their work organization and their focus on specialized training stimulate American banks to stick to competitive strategies that focus on price and consumer comfort. German banks, on the other hand, try to capture new markets through the excellent advisory capabilities of their employees, and thus employ a broad human resources development strategy. Keltner argues that the latter seems a more promising strategy for banks in both countries.

[23] But they have typically done well in reading and literature (Stedman, 1994: 24).

[24] Cf. Van Lieshout (1996b) for an extensive comparison of the German and Wisconsin apprenticeship regimes.

[25] Wisconsin was one of six states that would have cooperated with the federal government to establish a statewide youth apprenticeship system if the Youth Apprenticeship Act had been passed by Congress and signed by the President. We will discuss the subsequent development of an independent state youth apprenticeship system in Wisconsin in section 4.6.2.

[26] In addition, the importance of class rank in college admission procedures (cf. section 4.2.6) has had a similar effect.

[27] The National Skill Standards Board (NSSB) did subsequently sponsor a number of projects to try to build linkages between academic and skills standards at the state level (NSSB website).

[28] Of the 168 identified programs, 56 concern executive, administrative and management personnel, and another 31 concern professional specialties. 16 programs concern technicians, 24 concern precision production, and only 6 concern operators (Wills, 1994a: 16).

[29] In 1994, an estimated 17,000 students were enrolled in some form of work-based learning (DILHR et al., 1994). About 7,000 of these were (traditional) cooperative education students. This number has been over 11,000 in the past. The other 10,000

were students enrolled in work-study programs, job shadowing, internships, on-the-job training and some youth apprentices.

[30] In addition, legal issues necessitate validation procedures even if employers associations develop standards and assessment procedures (cf. Wills, 1994a, p. 5-6).

# 5 The Dutch market for intermediate skills

## 5.1 Introduction

Given the substantial differences between the German and American market for intermediate skills and their institutionalization, it will hardly come as a surprise that the Dutch version, in many respects, occupies some sort of middle ground between those two. One of those respects is the stability of the institutionalization of the Dutch market, and the scope of its reform over the past decades. On the surface, it would appear that the Dutch governance regime and the underlying market have substantially changed over the past decade due to a series of reform efforts and policy processes culminating in a new VET Act in 1996. At the same time, dominant governing principles as well as the underlying choices of individuals and firms show more continuity than those vast policy efforts would suggest.

This chapter will analyze the governance regime that governs the Dutch market for intermediate skills, and the way in which various actors respond to the incentive structure it poses. Like in Germany, this regime has supported a seemingly stable high-skills equilibrium; but there are interesting differences in the exact constitution and operation of this equilibrium between both countries. The extensive field work done for the study 'Beroepswijs onderwijs' for the 'Wetenschappelijke Raad voor het Regeringsbeleid' (WRR; Dutch Scientific Council for Government Policies), August-December 1992, served as the backbone and starting point for the analysis (and, as has been discussed in chapter 1, for this entire comparative project). This included 45 interviews with representatives of the national government (i.e. various government departments), of national peak employers' associations and union federations, of employers' associations and unions in construction, metalworking, business services and retail, of small and large firms in those four sectors, and also with upper secondary and tertiary VET schools and schools for related instruction (Dercksen & Van Lieshout, 1993: 18-19). From 1992-1997, 17 subsequent face to face interviews were conducted with representatives from the same and additional organizations, such as the association of the sector-specific national bodies that set skills standards in Dutch VET (Colo, 'vereniging van kenniscentra beroepsonderwijs en bedrijfsleven'), and the association of Dutch VET colleges (Bve raad, 'Beroepsonderwijs en Volwasseneneducatie raad'). From 1997-2003, (interviews in the process of) research projects for the Hugo Sinzheimer Instituut (HSI), as well as various seminars I attended and (co-)hosted, and additional phone interviews, have benefited me in further shaping this chapter.

Section 5.2 will discuss the Dutch socio-economic order, industrial relations and some key aspects of labor market governance and operation. Section 5.3 will portray the Dutch education system and its various components. Section 5.4 will analyze Dutch school-to-work transition patterns. Section 5.5 will portray the

aforementioned process of gradual but continuous Dutch VET reform over the past decades. Finally, section 5.6 will conclude with an analysis of the Dutch skill equilibrium, and the incentives it provides for firms and individuals to invest in training, comparative to its German counterpart.

## 5.2 Socio-economic order, industrial relations and labor market governance in the Netherlands

### 5.2.1 The Dutch state and socio-economic governance

Unlike the federal states of Germany and the United States, the Netherlands is a nation-state. The Netherlands does have an intermediate regional level of government between local municipalities and national state, as it consists of twelve provinces. These provinces enjoy substantially less power and authority, and fulfill less prominent governing roles than either German or American states. As they fulfill no prominent governing roles in the Dutch labor and VET markets, we will abstain from further discussing them. The local level is generally more important than the provincial level from a governance perspective, as municipalities (496 in 2002) fulfill various roles prescribed by national legislation, mostly in implementing national programs/systems. But while municipalities do fulfill legally institutionalized roles for adult education, they currently do not have such roles for VET, which is why we will also abstain from further discussing them. Dutch labor market, education and VET governance regimes are thus distinctly national, with (traditionally, and from an international comparative perspective) relatively minor regional or local differences. The focus in this chapter will thus be on national legislation and policies, as well as on the sector level, where collective bargaining and skills standard setting bodies are important components of labor market and VET governance regimes.

Just like in Germany (and in contrast to the U.S.), the Dutch state is actively involved in economic adjustment, in cooperation and negotiation with private agents within an elaborate institutional environment, and collective adaptability plays a distinct role (cf. CPB, 1997: 139-140). Katzenstein's characterization of democratic or social corporatism applies very well to the Dutch case (Visser & Hemerijck, 1997: 91-92):

> "…an ideology of partnership, expressed at the national level; a relatively centralized and concentrated system of interest groups: and voluntary and informal coordination of conflicting objectives through continuing bargaining between interest groups, state bureaucracy, and political parties" (Katzenstein, 1985: 32).

In the Netherlands, this general characterization has historically taken a very unique shape known as pillarization ('verzuiling'). With the northern majority of the country historically Protestant, but a significant Roman Catholic minority dominating the south, Dutch society has had a historical need for pacification of religious tensions and, building on a tradition of guild-like political organization, pillarization emerged as the Dutch solution to this problem (cf. Daalder, 1971). The term reflects the segmented organization of Dutch social life in the broadest sense in separate, functionally equivalent but ideologically distinct, organizations over most of the 20th century. Each pillar was based on one separate ideology and consisted of all social organizations identified by and adhering to this ideology - from schools to unions to political parties to sports clubs to radio and television networks and a great many more. Four pillars can be distinguished. Two of these have a religious basis, and result from the historical fact that the northern part of the country has been predominantly Protestant, while the southern part has been predominantly Catholic. The other two have a political basis, and represent the liberal spirit[1] of the 19th century, versus the social-democratic/socialist critique of (pre-modern) capitalism. Until late in the 20th century, all the organizations a typical Dutch citizen would join over the course of his/her life would belong to one of these pillars. As a result, social contacts between these pillars would be minimized; cross-pillar marriages, for instance, were usually actively discouraged by parents and other meddling adults (i.e. ministers and priests), and were controversial at the very least. And for most of the century, each pillar was strictly controlled by a small elite. These elites cooperated with each other and negotiated compromises to achieve a remarkably stable national order (cf. Lijphart, 1968). Since the 1960s, however, the pillars have started to disintegrate, as a result of (among other factors) secularization, mass individualization and minority and gender emancipation. Protestant and Catholic organizations, for instance, have often merged; the (historical) ideological background of a particular organization has become a less dominant factor in shaping its views; and cross-organization interest and position coordination within each pillar (e.g. between a Roman Catholic union, Catholic political party and Catholic employers' organization) has loosened.

Politics offers a good and relevant example of this pillarization phenomenon and its weakening grip on Dutch society. The Netherlands, like Germany, has a multi-party political system. Various Christian parties have for a long time dominated Dutch politics, forming subsequent center-right or center–left coalition governments with either the right-wing VVD ('Volkspartij voor Vrijheid en Democratie') party or the social democrat Labor party PvdA ('Partij van de Arbeid'), occasionally joined by additional smaller parties. For most of the 20th century, the Christian parties CHU and ARP reflected different religious/ideological streams within the Protestant pillar, while KVP represented the substantial Roman Catholic minority. What would have been inconceivable before that period happened by 1980: these three Christian

parties merged into one Christian democratic party: CDA ('Christen Democratisch Appèl'). CDA continued to dominate Dutch politics through alternating coalitions until another political landslide occurred in 1994. A large CDA loss in the 1994 elections led to a historical novelty in Dutch politics: a so-called 'purple' coalition of VVD, PvdA and D'66, (a smaller, relatively young left of center democratic party that had always promoted such a coalition). It marked the first government since 1918 that did not include CDA or one of its three ancestors. After two purple coalitions, however, CDA regained its central position as the largest party in the 2002 elections.

Coalition governments and pillarization have reinforced consensus building, centrist political solutions, and incremental change as dominant Dutch political strategies. The Netherlands has inherited a distinctive legacy of a state dependent on private groups for the management of public affairs (Hemerijck, 1993). Dutch Christian democrat political doctrine has provided the ideological basis for this tradition, both through the Protestant principle of 'sovereignty in one's own circle' and through the Catholic subsidiarity principle[2]. In a nutshell, both principles imply that responsibilities should reside at the lowest possible level where they can be exercised effectively. These principles have enabled the aforementioned pillarization pattern of Dutch social organization to develop as it did: it calls for the state to remain reluctant in seizing (full) governance control, leaving room for the myriad of Christian, social or other organizations to fulfill their important governing roles. The principles simultaneously allowed for decentralized governance patterns within each pillar - particularly relevant for the Protestant-Christian community whose religion has a decisively local organizational pattern, contrary to the pope-centered governance regime of the Roman Catholic Church. These roots have helped to shape a Dutch tradition in which state governance, in most fields, relies heavily on various intermediate social organizations that fulfill prominent governing roles. Industrial relations (section 5.2.2) and labor market policy and social security have been cases in point (section 5.2.3).

### 5.2.2 Dutch industrial relations

Both Germany and the Netherlands are characterized as corporatist industrial relations systems: there is active state interference with industrial relations, but usually in consultation with the social partners, which implies active state support for employer's associations and unions and their mutual relations (Van Waarden, 1995). As in Germany (and contrary to the firm-level focus in American industrial relations), important responsibilities reside with unions and employers' associations at the sector level. Dutch industrial relations show, however, more strongly evolved roles for national peak associations than in Germany, and more instances of tripartite governance (with the state and the social partners sharing responsibilities).

#### 5.2.2.1 Unions

Like German unions, Dutch unions are examples of the industrial-political union model (Visser, 1995). And both countries' labor movements stand out in international comparative perspective with high official-to-member ratios, with substantial staff available to them, and a high status (Visser, 1995). But, contrary to Germany, their development in the Netherlands has also been shaped through the pillarization pattern, with traditionally separate social-democratic, Catholic and Protestant-Christian peak associations with their own sector affiliates. Today, there are three important union peak associations. The social-democrat and Catholic peak associations merged in the seventies into the Confederation of Dutch Trade Unions ('Federatie Nederlandse Vakbeweging' or FNV), with some catholic affiliates instead opting for a merger with the Protestant-Christian peak association in the Christian-National Union Confederation ('Christelijk-Nationaal Vakverbond' or CNV). In 1999, FNV represented 64% of Dutch union members, CNV 19% (calculations based on CBS figures cited in Nagelkerke & de Nijs, 2001: 27), and a third peak association 11%. This third peak association is organized more on a sector- and occupational specific basis: the Union of White Collar and Senior Staff Associations ('Vereniging van Hoger Personeel' or VHP). These unions enjoy no exclusive jurisdictions and must therefore cooperate in collective bargaining, where single table bargaining with employers is the rule (Visser & Hemerijck, 1997). Union membership has declined substantially: from 40% in 1979 to 27% in 1999 (CBS figures, cited in Nagelkerke & de Nijs, 2001: 27). The strongly institutionalized roles of Dutch unions at the various levels (to be elaborated upon below) have, however, so far prevented this membership decline from translating into a substantial deterioration of their influence. Union membership is substantially higher among 24-64 year old workers (28%) than among youths and young adults under 25 (13%; CBS figures for 1997, cited in Nagelkerke & de Nijs, 2001: 28). The Dutch labor movement is considered to be somewhat more intensely integrated in a vertical direction (particularly as their peak associations have bargaining mandates from their members, which their German counterparts lack). The German labor movement, on the other hand, is considered to be somewhat more intensely integrated in a horizontal direction – meaning they unite a relatively broad range of people with different backgrounds and interests (Visser, 1995).

The dominant level of union organization is the sector: FNV and CNV consist of separate unions organizing workers across broad economic sectors. The recent merger (1998) of four large FNV affiliates (the industrial union, the transport union, the food sector union and the service sector union) into 'FNV Bondgenoten' constitutes the prime example of a further enlargement of union scope. This is now the largest FNV affiliate (2000: 490,300 members), with the civil servant union second (360,000 members), the construction and wood union third (159,600

members), and the other FNV affiliates around 50,000 members or below (CBS figures, cited in Nagelkerke & de Nijs, 2001: 30). Overall union membership is below average in financial services (including banking), and above average in construction (Nagelkerke & de Nijs, 2001: 29); metalworking occupies an intermediate position. Unions organizing particular occupations (e.g. Association of Dutch Commercial Pilots, an MHP member), function levels (e.g. the Brotherhood of Fire Fighters) or firms (e.g. the Association of Higher Personnel Philips) do exist, but they are the exception.

#### 5.2.2.2 Employers' associations

Dutch employers are well organized: nearly all firms with 30 or more workers are members of an association, and membership levels are in the 80%-90% range (Van de Wijngaert, 1994, cited in CPB, 1997; Van Ruysseveldt & Visser, 1996: 221). In 1981, there were no less than 1,254 employers' associations in the Netherlands – one association for every 173 firms (Van Waarden, 1995: 71). The Dutch system of employers' organizations is characterized by a reasonably high level of cohesion (Van Ruysseveldt & Visser, 1996: 221). VNO-NCW ('Vereniging Verbond van Nederlandse Ondernemingen - Nederlands Christelijk Werkgeversverbond') and MKB ('Midden- en Kleinbedrijf)' Nederland are the peak employers' associations. VNO-NCW is the product of a 1996 merger of two former pillarized peak associations, a general one (VNO) and a Christian one (NCW), that had previously institutionalized their mutual cooperation in a Council of Dutch Employers' Associations ('Raad van Nederlandse Werkgeversverbonden' ). VNO-NCW, (as were its immediate ancestors) is a mixed general association that combines social and economic interest organization (Van Waarden, 1995). VNO-NCW members are roughly 150 sector level employers' associations and 250 individual, mostly large, firms (Nagelkerke & de Nijs, 2001: 38). In all, roughly 80,000 firms are covered this way. Almost all Dutch firms with more than 500 workers are a VNO-NCW member. Some VNO-NCW members are large federations of employers' associations themselves, such as FME ('Vereniging voor de Metaal- en Elektrotechnische Industrie', the Federation for the Metalworking and Electrotechnical Industry) and AVBB ('Algemeen Verbond Bouwbedrijf', General Association of Construction Firms). MKB Nederland is the central employers' peak association for small and medium-sized firms. It consists of approximately 125 sector level associations and 400 regional and local associations, thus covering approximately 125,000 firms. All peak associations (including those from the agricultural sector not discussed here) cooperate and coordinate their affairs in the Council of Central Employers' Associations RCO ('Raad van Centrale Ondernemingsorganisaties')[3].

At the sector level, Dutch employer's associations are relatively differentiated, which allows for inter-association competition between different associations (Van

Waarden, 1995). The membership density of the dominant sector employers' associations in construction and metalworking (93% and 87%) are, however, even higher than in Germany (69% and 73%; Van Waarden: 90). So while the associational system in general is highly differentiated (and thus low in cohesion), important individual associations are among the most highly developed and representative associations in the world (Van Waarden, 1990).

*Collective bargaining*

Collective bargaining has been institutionalized by the 1927 Collective Bargaining Agreements Act ('Wet op de collectieve arbeidsovereenkomst' or CAO Act). Initially, this Act merely covered employers who participated in bargaining themselves, and thus implied firm-level regulation. It required employers to apply collective bargaining agreements to all their personnel, not just to union members (Albeda & Dercksen, 1994: 62). The 1937 Collective Bargaining Agreement Extension Act ('Wet op het algemeen verbindend en onverbindend verklaren van bepalingen van collectieve arbeidsovereenkomsten' or AVV Act) enabled the extension (or abolition) of stipulations of collective bargaining agreements by the Minister of Social Affairs to cover all (not merely organized) employers and workers in a sector. Extension is conditional upon a majority requirement: a collective bargaining agreement's conditions should already apply to a substantial majority of the employed in the sector (Albeda & Dercksen, 1994: 106). Stipulations can be abolished on the grounds of conflicting with general interest and/or a too substantial disadvantage to legitimate interests of third parties (Albeda & Dercksen, 1994: 106).

As in Germany, and contrary to the US, the large majority of Dutch collective bargaining agreements is concluded at the sector level, between sector level unions and employers' associations. In 2000, there were 185 sector collective bargaining agreements covering 4,360,000 workers directly (4,910,500 if we include workers covered through extension) and 767 firm level collective bargaining agreements covering 785,000 workers (Arbeidsinspectie, 2000). The duration of agreements is mostly one year or sometimes two years. The number of firm level agreements has doubled since the seventies. Most firm level agreements are concluded by large firms: they tend to cover 700-800 workers on average (Albeda & Dercksen, 1994: 111). Firm level agreements are exempted from the extension of a relevant sector agreement only if at least one of the unions signing the firm level agreement has either also signed the sector agreement, or is organized at the sector level; or is a member of one of the aforementioned peak associations (Albeda & Dercksen, 1994: 110). This principle intends to limit the risk of firm level agreements undercutting sector agreements.

#### 5.2.2.3 Works councils

Different from Germany, co-determination at the enterprise level is virtually absent in the Netherlands (CPB, 1997: 334). As in Germany, works councils are institutionalized at the firm level through a national Act: the 1950 Works Councils Act ('Wet op de Ondernemingsraden'). Works councils are compulsory for firms with over 100 employees or at least 35 employees for more than one third of normal working hours. In firms that do not meet these requirements, employers are required to consult their workforce at least twice a year. Works councils have mandatory advisory rights towards management in some areas (e.g. important changes in work organization, group-wise recruitment or hiring of labor) and right of consent in others (e.g. pay system, recruitment/lay-off/promotion policies, training and assessment). These rights have been gradually expanded with various amendments to the original Act. With its 1998 amendments, works councils have gained the opportunity to conclude a works council agreement with the firm. This may include stipulations regarding labor conditions as long as these conform to legal and collective bargaining standards. This change accommodates the practice that had already emerged where works councils concluded side agreements outside their legal jurisdiction with employers, to accommodate firm specific solutions to situations not taken care of by law or collective bargaining agreement (Nagelkerke & de Nijs, 2001: 187-189). Members are elected on a personal basis, but union lists of candidates dominate the vote (by 69% in 1993 (Van Ruysseveldt & Visser, 1996: 231)). Unions have also provided training for many works council members, and union shop stewards have generally had good contacts with (or have been a member of) works councils. Dutch unions are, however, not strongly represented on the shop floor and exercise only a marginal influence within firms, except indirectly through the aforementioned works councils (Van Ruysseveldt & Visser, 1996: 232). But Dutch unions have not been able to capture works councils to the extent of their German counterparts (Visser, 1995), and German worker/union influence at the firm level in general and through works councils in particular is considered stronger (CPB, 1997: 337/338).

#### 5.2.2.4 National level consultations

Besides the sector and firm level, Dutch industrial relations have always been strongly evolved and institutionalized at the national level. Two important institutions emerged in the wake of World War II: the Labor Foundation and the Socio-Economic Council.

Peak associations of employers and unions created the Labor Foundation ('Stichting van de arbeid' or STAR) in 1944 (Albeda & Dercksen, 1994). This foundation is a forum for their joint negotiations that may result in central agreements covering

their members. Intention agreements rather than binding central agreements are, however, the rule (Nagelkerke & de Nijs, 2001). But these will still have an informal effect on members, and the repeated consultations in this body (as well as the SER, discussed below) contribute towards generally good relationships between both parties - certainly as compared to the generally conflict-ridden American industrial relations. Whenever a central accord has been concluded in this Labor Foundation, it tends to have a marked influence on Dutch socio-economic development in general and collective bargaining in particular. The prime example is the famous 1982 'Accord of Wassenaar', which is discussed below.

The Socio-Economic Council ('Sociaal-Economische Raad' or SER) was created in 1950. Originally primarily intended as the top level of the typically Dutch structure of Public law organization of firms ('Publiekrechtelijke Bedrijfsorganisatie'), its most important function has become to advise the government regarding socio-economic policy (Albeda & Dercksen, 1994: 65). Socio-economic state regulation is typically passed through the SER for advice, and these recommendations have often had a marked influence. Contrary to the bipartite Labor Foundation, this is a tripartite organization consisting of equal numbers (11) of representatives of employers, unions and the 'crown'. The latter are external, independent members appointed by the state to represent public interest.

#### 5.2.2.5 The role of the state in industrial relations and wage setting (1)

The institutionalization of central level negotiations between peak associations is already a marked difference from German industrial relations, where there is not a formal system of joint discussion between peak associations at the national level[4]. But an even more pronounced difference is the strong influence of the Dutch state on industrial relations in general and wage bargaining in particular. The German state leaves more regulation issues to the social partners, and the most prominent example is German 'Tarifautonomie' versus the continuing direct and indirect role of the Dutch state in wage setting. In the face of the formidable task of rebuilding the country after World War II, a Dutch political consensus emerged on achieving a wage level below that of surrounding countries. This result was to be achieved by a state-guided wage policy consisting of yearly state-mandated wage rises, which left collective bargaining irrelevant for wage levels from 1945-1964 (Albeda & Dercksen, 1994: 64). A government agency (Board of Government Mediators 'College van Rijksbemiddelaars') formally issued annual wage guidelines that were in reality agreed upon by STAR (and soon, SER) and government (Visser & Hemerijck, 1997: 92). In the sixties, economic forces (labor shortages that caused additional, 'black' pay on top of the formal wage to become a growing practice), growing political unrest in general, and growing opposition of union members to the state-led restricted wage policy in particular caused wage explosions within this

system. These resulted in wages being up to par with neighbor states by the late sixties, and ruined the policy (Albeda & Dercksen, 1994; Visser & Hemerijck, 1997: 93).

The 1970 Wage Law legalized free collective bargaining, but simultaneously still offered the government the opportunity to call for a wage freeze if the national economy should require so (Albeda & Dercksen, 1994: 69). Then the first Oil Crisis struck in 1973, and a left/center government created another law giving the Minister of Social Affairs unprecedented jurisdiction in income policy for both workers and others (Albeda & Dercksen, 1994: 70), which was immediately used in 1974. Subsequent years again left scope for collective bargaining. But the 1970s are characterised as 'the troubled management of a high wage economy' and a 'noisy lack of consensus', and the period 1976-1982 in particular as a policy stalemate and 'corporatism without consensus' (Visser & Hemerijck, 1997: 93; 94; 96-98). The oil crisis of 1979 hit even harder than the first one, and the subsequent recession and rising unemployment in combination with the inability of social partners to come to an agreement in the Labor Foundation again caused state wage measures in 1980-82 (Albeda & Dercksen, 1994: 71-72).

#### 5.2.2.6 'Wassenaar' and beyond

By 1980, radical socio-economic reform was needed, and would soon emerge. An alarming report by the Scientific Council for Government Policy (WRR, 1980) criticized the 'waiting for corporatism' attitude, and the state installed an ad hoc committee (named the Wagner Committee, after its chair, a captain of industry) including indirect representation of employers and labor (Visser & Hemerijck, 1997: 99). It argued that the country was in trouble and private firms needed help. The committee recommended (amongst other things) that firms' profitability should be boosted through lower wage and energy costs; that the operation of the labor market should be improved through decentralized wage bargaining allowing for larger wage differentials; moreover, that public expenditure had to be reduced; and that social security should be revised to include more work incentives (Van Dellen, 1984). This committee also marks the start of a process of VET reform over the next decades, to be discussed in the next section. The 1982 elections left the social-democrats in the opposition, and a no-nonsense right-center coalition in power. It presented its plans in November 1982. They included the suspension of price compensation, and the freezing of civil servants' wages, minimum wages, and social benefits (Visser & Hemerijck, 1997: 100).

Two days later, peak associations of employers and unions concluded the famous 'Wassenaar' central agreement. It was named after Wassenaar where and when these peak associations began a reorientation towards a coordinated and bipartite model of negotiated guidelines for responsible wage bargaining (Visser & Hemerijck,

1997: 81). Formally the 'Wassenaar' agreement was only a recommendation, not a formal agreement with legally binding implications; but it proved as at least as influential as any formal agreement might have been (Visser & Hemerijck, 1997: 82). Having convinced themselves that improving firms' profitability was the *sine qua non* for economic recovery and job growth, wage moderation became the dominant strategy for Dutch unions. In exchange for moderated wage demands by these unions, employers were willing to bargain over shorter working hours. Parliament responded with a swift special Act allowing the opening of existing bargaining agreements to facilitate negotiations over job redistribution and shorter working hours, which occurred for two-thirds of all agreements within two years (Visser & Hemerijck, 1997: 101). Over the years, the Wassenaar agreement was followed by various guidelines, joint opinions, reports of advice, recommendations and agreements by the Labor Foundation, and influenced thousands of bargaining outcomes (Van der Toren, 1996).

A decade later, a similar change of events occurred in the wake of an emerging recession in 1992 (Visser & Hemerijck, 1997: 106-109). The Minister of Social Affairs and Employment threatened to impose wage freezes (still a possibility under the 1988 amendments to the Wage Act) in 1992 and 1993, and in 1993, even withdrawing the 1937 Collective Bargaining Agreement Extension Act became a topic of discussion. In December 1993 the peak associations of employers and unions produced a new accord, called 'A New Course'. Unions promised to continue wage restraint and to allow further decentralization and flexibility, while employers promised to give up resistance to further working hours reductions and agreed to involve works councils and local unions in negotiations on local solutions. Again the agreement had consequences in subsequent sector and firm level bargaining.

Visser & Hemerijck (1997) have interpreted 'Wassenaar' as the start of a phase they label 'corporatism regained'. In combination with later changes in (active) labor market and social security policy, it provided the basis for the remarkable economic recovery and job growth in the Netherlands since then. Wage moderation caused the change in labor costs per hour worked in manufacturing to remain at 57.5% over the period 1980-1994, as compared to 102.4% in Germany and 68.4% in the U.S. (SZW, 1996). Between 1982 and 1996 the Dutch average rate of job growth was on par with the American job machine, and four times as high as the E.U. average (Visser & Hemerijck, 1997: 23), and it continued until the recession hit around 2002.

There has been some discussion as to whether Dutch industrial relations have actually been decentralizing since 1982. Tros (2000) has extensively researched this hypothesis, and concludes that the assumption reflects common belief and ideology rather than facts. He identifies both centralizing and decentralizing tendencies, and proposes the label of deconcentration to analyze changes in Dutch industrial relations: the increased use of local level consultation and regulation *without* the (formal) delegation of such competencies from higher levels.

#### 5.2.2.7 The role of the state in industrial relations and wage setting (2)

Besides highlighting an important phase in Dutch industrial relations, the point of the preceding description was to further underline the much more prominent and involved role of the Dutch state in industrial relations, as compared to its German counterpart. Visser & Hemerijck (1997) keenly stress the important role of pressure and threats by the Dutch state in getting the social partners to bridge their substantial differences and find a mutually agreeable way out in central accords. They capture this aspect with the phrase 'the shadow of hierarchy' (of the Dutch state) across Dutch industrial relations. This influence was quite visible in the conception of both central accords discussed above. And it remained prominent in the aftermath of the second accord, when the state made application of the Collective Bargaining Agreement Extension Act conditional upon the inclusion of measures considered beneficial for the employment prospects of unskilled workers. As one particular and intended consequence of this state policy, employer' associations and unions have expanded the use of entry wage scales at or near the minimum wage in collective bargaining agreements from 6% in 1993 to 68% in 1995 (Venema et al, 1996; Visser & Hemerijck, 1997: 108). This shadow of hierarchy in Dutch industrial relations bears a strong resemblance to the shadow of hierarchy employed by the German state on, in particular, employers (through threats of government intervention and a training tax) in the face of shortages of apprenticeship positions there (cf. section 3.7.1).

#### 5.2.2.8 Chambers of Commerce

Another marked difference with Germany is the absence of a separate, legally institutionalized artisan sector in the Dutch economy. There may be legal requirements for gainful employment and/or entrepreneurship in a particular occupation or sector, but these primarily concern professions that require tertiary education, and the general trend has been to gradually limit their number[5]. Despite having similar medieval guild roots as Germany, Dutch local handicraft organizations are not independent associations (Van Waarden, 1995).

As in Germany, the Netherlands has Chambers of Commerce that form a separate column of business representation from business associations and employers' associations. And, as in Germany, they are a public-private mix of governance mechanisms in that they simultaneously are regional business associations with public authorities. Instead of separate Chamber networks for different economic segments, the Netherlands has just one national network of currently 21 regional, autonomous chambers. These are controlled by a general board, consisting of an equal number of representatives of three segments: small and medium-sized firms, other firms, and unions. These board members are appointed by the respective

types of business and/or employers' associations and unions. The SER decides which associations may appoint general board members for the various regions (Staatsblad, 1997). The Department of Economic Affairs (EZ) oversees the operation of the Chambers. The goal of these chambers is to stimulate economic interests of trade, industry, artisan production and services in their region. They have three main tasks: to promote regional economic activity by advising government and stimulating local economic development; to support regional businesses through individual and collective information and advice; and to implement particular laws (most prominently, they operate the public business register). In 1963, the word 'economic' was specifically included in the law to limit the kind of 'interests' the Chambers were to represent, and to specifically exclude them from the area of social interest representation (Tweede Kamer, 1996-1997). Therefore, the Chambers do not fulfill governing roles in the field of VET, unlike their German counterparts.

### 5.2.3 Dutch labor market governance

In chapters 2 through 4, we have abundantly illustrated the sharp differences between the American labor market and its institutionalization on the one hand, and the German and Dutch ones on the other (cf. in particular section 3.3.3 and CPB, 1997). In the *competitive* model, for which the U.S. is a key example, (labor) market failure is reduced by supporting competition through the reduction of entry and exit barriers. The model relies on external labor market flexibility, tailor-made solutions at a decentralized level, diversity of labor conditions, and financial incentives to promote the allocative efficiency of the labor market. The specific institutional model into which this notion of labor market policy translates, consists of easy hiring and firing of workers, school-based education, modest levels of job and income security, firm-level wage formation, and ample room for managerial autonomy. Germany and the Netherlands are, in contrast, key examples of the *cooperative* model. This model relies on commitment of employers and workers to keep implicit agreements in labor relationships; internalization of external effects into the bargaining objectives of interest groups; the creation of economies of scale through centralized agreements between relatively homogenous interest groups of labor and capital; and solidarity between workers as wells as between insiders and outsiders. This translates into an institutionalization of the labor market distinguished by a high level of employment protection, dual education, income protection through more than modest social security benefits, centralized collective bargaining, and institutionalization of worker representation at the firm level as a constraint to managerial prerogative. Following up on the American-German (and Dutch) contrast discussed in earlier chapters, we will focus on illustrating German-Dutch differences in operation and performance of labor markets, as well as in the institutionalization of the latter.

#### 5.2.3.1 Economic and labor market performance

The Dutch economy has outperformed the German one over the nineties. Until 1988, the Dutch relative position in per capita GDP declined, before beginning a remarkable recovery. Germany's position has remained stable as compared to European averages. The GDP volume growth rate from 1990-1996 was 2.2 for the Netherlands and 1.4 for Germany (CPB, 1997: 83). Dutch per capita GDP, however, still lags that in West-Germany (CPB, 1997: 81). Labor productivity per hour work has improved in the Netherlands since the sixties relative to both Germany and, even more so, the U.S.: for, manufacturing, American productivity was twice as high as that in the Netherlands by 1960, but only slightly higher by 1995. In GPD per hour worked across the economy, Dutch productivity per hour worked (100) was higher than in both the U.S. (92) and Germany (82; CPB, 1997: 89). Standardized unemployment has been a more pronounced problem for Germany in recent years than for the Netherlands (9.0% in 1996 versus 6.3%; CPB, 1997: 90). As we have seen, Germany does perform better in terms of youth unemployment. The ratio of unskilled to skilled unemployment is most favorable for the Netherlands at 1.9; both German and even more so American unskilled workers have a relatively worse position relative to skilled ones, with ratios of 2.8 and 4.3 in 1994. Both European countries, however, share the problem of the persistence of unemployment for those who suffer from it, with 74% of Dutch and 65% of German unemployment being long–term as compared to just 17.1% in the U.S. (CPB, 1997: 90). Employment growth was highest in the U.S. over the eighties and lowest in Germany, with the Netherlands overtaking the U.S. in the early nineties, when German employment actually shrunk (CPB, 1997: 91). Average working hours are lower in Germany and even more so in the Netherlands than in the U.S. (CPB, 1997: 92).

#### 5.2.3.2 German-Dutch similarities and differences in labor market institutionalization

In institutional terms, CPB (1997: 284) contrasts the German 'internal labor market' and focus on commitment between employers and workers within long-term labor relationships with the Dutch system of 'flexicurity', with labor market regulations offering a mix between labor market flexibility and employment security. We have already emphasized the importance of the overlapping of occupational and internal labor markets (rather than just occupational or internal labor markets) in section 3.8.3. We now emphasize that the previous Dutch characterization has only (and increasingly) been valid since the nineties; in the stagflation times of the seventies and eighties, the Netherlands much more closely resembled the German situation. Employment protection in both countries is relatively strict as compared to the U.S., but lies at an intermediate European level (CPB, 1997: 285). Procedures

involving dismissals feature many similarities (CPB, 1997: 286-288). Differences are that German procedures for individual dismissals involve the works council but not employment offices, while Dutch procedures involve the employment offices or (alternatively and increasingly) the labor courts. And German employment protection is limited for small firms, as works councils are often lacking, and court appeal possibilities are small. Both countries have increased the room for flexibility in working hours, regulations concerning variable working hours being slightly more flexible in Germany (CPB, 1997: 288-291). Dutch regulations for short-time work are relatively stricter (CPB, 1997: 291-294).

#### 5.2.3.3 Flexible employment

But the primary difference is that part-time and flexible contracts have become more common in the Netherlands, which makes the Dutch labor market flexible relative to its German counterpart (CPB, 1997: 294-303). Part-time employment in the Netherlands is very high with 34% as compared to 19% in the U.S. and 16% in reunified Germany (CPB, 1997: 296). The difference cannot be adequately explained by different worker preferences, sector distribution of employment or differences in regulations. Flexible employment is also higher in the Netherlands, but does not stand out as much from overall statistics due to different measures and institutional differences. In 1995 10% of 1995 German contracts is for limited duration, while in the Netherlands 12% of contracts are either concluded for less than one year or have variable working hours (CPB, 1997: 296). Realizing that about half of those German contracts for limited duration are the (multi-year) apprenticeship contracts (as compared to about 20% in the Netherlands), we gain a better appreciation of the difference. In 1991, 24% of all Dutch jobs had a tenure of less than one year, as compared to 13% in Germany (and 29% in the U.S.; CPB, 1997: 300).

Another marked difference shows when we focus on employment through temporary employment agencies, which has grown tremendously in the Netherlands. The share of such employment fluctuated between 0.5% and 1% in the first half of the eighties, has been around 2% since then, and has increased towards 3% over the 1990s (CPB, 1997: 299). In Germany, it continued to hover around 0.3% of total employment (CPB, 1997) Dutch temp agency work is increasingly relevant for the transition between unemployment and employment, and the transition between education or training and employment. In 1997, half of Dutch temp workers were younger than 25; and 29% had been unemployed previously to their current temp job. 34% of all temp workers had found a permanent job within a year; and 41% of this group (14% of all temp workers) had found one with the firm they had been working for through the temporary employment agency (Van der Ende et al., 1999). In all, in 1997 an estimated 100,000 temp workers found a permanent job with the client firm they had been temporarily employed by (Arents et al, 1998). This

corresponds to almost 20% of all persons that found a permanent job that year. Interestingly, temp workers that were older, previously long-term unemployed, or physically challenged, had the same chances of finding a permanent job as other groups (Van der Ende et al, 1999). Dutch temp work growth preceded and enabled a remarkable revision of the institutionalization of employment through temporary employment agencies in the mid-nineties, intended to allow further growth.

#### 5.2.3.4 Flexicurity

We cannot discuss this remarkable process in detail here (cf. Wilthagen, 1998; for a specific application to VET markets, Van Lieshout & Van Liempt, 2001) but it is worthwhile to briefly illustrate both the flexicurity concept that emerged in the process, and the process itself. Dutch temp agency work has been re-institutionalized through a widely acclaimed national act that has explicitly adopted the flexicurity perspective: the 'Flexibility and Security' Act that came into force in 1999. This Act tries to preserve the core ingredient of short-term flexibility in temp work for client firms, while simultaneously offering more security for those workers who are somehow locked into this type of relatively unprotected employment for more than six months. In 1996 it was preceded and inspired by another influential central agreement between the peak associations of Dutch employers and unions in the Labor Foundation. Agreement and Act distinguished four[6] phases related to job tenure as a temp worker (cf. Verhulp, 1998; Grapperhaus & Jansen, 1999). Phase 4 implied that temp workers were awarded a permanent employment contract with the temporary employment agency, once they had worked for 18 months (including time spent in prior phases) for the same client firm, or for 36 months (including time spent in prior phases) for various client firms. Phase 3 already entitled them to fixed-term employment contracts for one or more three-month periods, and these contracts could not be terminated in case there was temporarily no work at a client firm. In addition, article 34 of the agreement concerned training rights for temp workers: as soon as a temp worker has been working for one temporary employment agency for 26 weeks, the agency must discuss the worker's training needs with him/her (phase 2). It also required temporary employment agencies to spend a gradually rising percentage (0.92% in 2002) of the total (gross) wage sum they pay their temp workers in a particular year on their training. And it created a training foundation for the sector, which has to monitor compliance with the training rules stipulated in the collective labor agreement and the Training Regulations[7]. In a nutshell, this re-regulation of temp work could be characterized as the institutionalization of tenure bonuses (improved employment security, pension rights, and training opportunities) for temp workers. It seeks to stimulate the creation of an occupational labor market for temp workers.

#### 5.2.3.5 The role of the state in industrial relations and wage setting (3)

Another German-Dutch difference is in the existence of state minimum wages in the Netherlands and their absence in Germany. The Dutch minimum wage law ('Wet minimumloon en minimumvakantiebijslag' or WMM) entitles workers from age 23 to 65 to a legal minimum wage. Collective bargaining agreements, however, typically have their lowest wage scales above this minimum. Article 14 of the WMM calls for a regular adjustment of the minimum wage rate according to certain procedures. Departing from this stipulation, the minimum wage was frozen from 1984 to 1990. In 1991, the article was changed through another Act. The main rule now is that the minimum wage rate is regularly adjusted to the weighted average of contract wages in the private and public sector. If, however, these wages or social security volumes grow so substantially that they may damage the employment level, the state may still depart from this main rule. In general, this institutional difference has not translated into substantial differences in actual lower wages. The lowest level of gross wages appears to be a bit higher in Germany for blue collar workers as compared with the Dutch minimum wage, while those for white collar workers appear to be a bit lower (Vogels, 1994, cited in CPB, 1997: 310).

Youth wage governance shows a more interesting difference between both countries. Ryan & Büchtemann (1996: 331) assert that low wage-for-age scales must be legitimated by guaranteed training quality. For Germany, the near monopoly of the apprenticeship system achieves such a situation, and upon graduation the newly acquired credentials guarantee a significant pay rise. The latter also applies to Dutch apprenticeship itself (to be discussed in the next section), but the general Dutch youth wage picture is different, as Dutch apprenticeship only accounts for a (albeit, significant) minority of Dutch youth labor. The majority of the Dutch youth labor market consists of regular jobs (a significant share of which are either part-time and/or temp jobs, many of them occupied by full-time students). Here, wages are influenced by an age related minimum wage system which only calls for adult minimum wages at age 23, which is mirrored in separate (somewhat higher) youth wage scales in Dutch collective bargaining agreements (cf. Doup & Asscher-Vonk, 1991: 7-8; Quispel, 2000: 64). Article 7.3 of the WMM creates the possibility to set minimum wages for younger age groups. Article 8.3 stipulates that the minimum wage for this younger group, should only be a certain percentage of the adult minimum wage. This percentage can be different for workers of a different age and in different occupations or economic sectors. Such regulations became effective of January 1st, 1974. It entitled 15[8]-22 year old workers to a youth minimum wage that was established as an age-dependent percentage of the adult minimum wage rate. For each year that a young person was younger than 23, the relevant youth minimum wage rate would be 7.5% lower than the adult minimum wage. Hence, it ranged from 40% for 15 year olds to 92.5% for 22 year olds. The chosen mechanism

of an age-dependent sliding scale was based on the prevalent youth wage situation in those days. The idea was to extend minimum wage protection to extend to youths and young adults, particularly those not covered by collective bargaining agreements. Of course, the Act simultaneously and until today institutionalizes and legitimizes age discrimination. Arguments were and are that youths are not considered to deliver a full work performance and therefore should not receive a full wage; that they are typically not bread winners and therefore can afford lower wages; and that low youth wages help remedy youth unemployment (Doup & Asscher-Vonk; 1991: 8). In 1980, the Minister of Social Affairs and Employment asked the SER for advice on decreasing youth minimum wages. He argued that this group typically excluded breadwinners with dependent children; that high youth wages do not stimulate youth employment; and that it would help economize on public expenditure. In those days, in particular the second reason was compelling as youth unemployment had started to rise quickly in the wake of the second oil crisis. The SER advice on the matter was divided, but the proposal got implemented anyway, albeit in somewhat moderated form. Starting in 1981, the percentages for 15 and 22 year olds were set at 35% and 90%, respectively. Starting July 1st 1983, the percentages were again decreased. The smallest decrease was for the 15- and 22-year olds, by each 5%, to 30% and 85%, respectively. But for all other age groups, the decreases were higher, with 20-year olds receiving the highest decrease by 8.5%. As all these percentage cuts came on top of a general freeze of the base rate (the adult minimum wage), youth minimum wages plummeted substantially over the eighties. In 1988, the state even proposed to expand coverage of the specific youth regime to include 23-26 year olds, again to combat unemployment for that group; the proposal was heavily criticized and defeated by a parliamentary motion (Doup & Asscher-Vonk, 1991: 57).

Despite these institutional measures, the overall adult/young wage differential is somewhat larger in Germany than in the Netherlands (-0.38 versus -0.21, respectively; 1993 data, OECD 1996b: 139). But it is by far the highest in the U.S. (-1.71). Relative to older workers, at least, Dutch youths thus appear to be relatively better paid than their German and particularly their American counterparts. But Ryan & Büchtemann's point was not to argue against low (youth) wages as such, but that they should be legitimized by guaranteed training quality - which is not the case for this Dutch youth labor market segment. In a 1996 overview of age boundaries in legislation (discussed in parliament in 1998), the government noted that the argument of youths not being fully productive should only apply to apprenticeship and work experience positions. It proposed to analyze possibilities for replacing the age criterion by an experience criterion (Quispel, 2000: 64). A new bill for an Act Equal Treatment on Age Regarding Work, however, continues to legitimate youth minimum wages (Tweede Kamer, 2001-2002).

## 5.3 The Dutch education system

### 5.3.1 Main characteristics

Bakker (2001: 37-38) lists four important characteristics of the Dutch education system. First, it is historically characterized by a strong role for the state in combination with an important role for private initiative (cf. van Kemenade, 1981). Since 1814, education has been identified as an object of government concern by the Dutch constitution. The Dutch department of Education, Culture and Science (conditional, obviously, on parliamentary consent) plays a dominant role in the governance of Dutch education, both through legislation and the sponsoring of schools and colleges (cf. Knippenberg & van der Ham, 1994). Amongst other things, it decides (EURYDICE, 2001):

- the types of schools that may exist;
- length of courses in each type of school;
- for some, particularly, primary and secondary, types of schools:
    - subjects that must or may be taught;
    - minimum and maximum number of teaching periods to be devoted to each subject;
    - minimum and maximum number of teaching periods per year;
    - length of teaching periods;
- number of students in a class;
- standards of competence for teachers;
- salaries and other labor conditions for teaching staff (based upon collective bargaining with teacher unions);
- entry requirements and arrangements to school types;
- examination arrangements;
- school democracy and influence for staff, pupils/students and parents;
- norms for founding and closure of schools.

Second, the typically Dutch process of pillarization (cf. section 5.2.1) has resulted in an organization of education along the lines of these religious/political pillars (cf. Dronkers, 1992). The Netherlands are unique in the way that the state has safeguarded freedom of (state-sponsored) education by different societal religious/political groups both formally and materially (Knippenberg & van der Ham, 1994: 11). As a result of a 'schools dispute' over the late 19th and early 20th century to achieve complete equality under the law for private and public schools, the matter became 'pacified' in 1917. Since then, Article 23 of the Constitution guarantees freedom of education, which includes the freedom to found schools (freedom of establishment), to organize the teaching in schools (freedom of organization of teaching), and to determine the principles on which teaching is based (freedom of

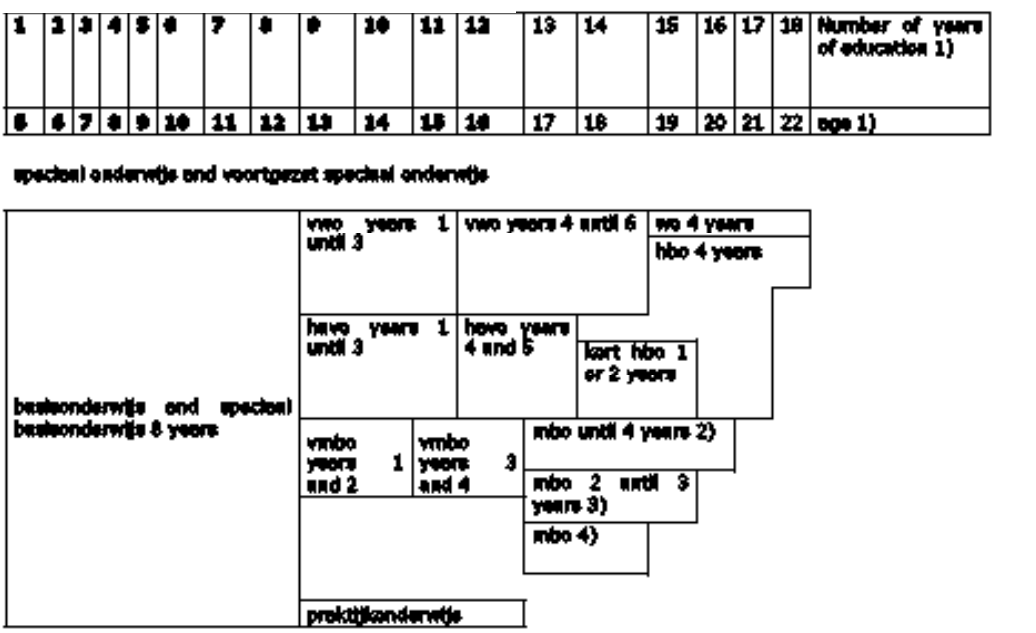
conviction) (EURYDICE, 2001). As a result there are both publicly run and privately run (not-for-profit) schools in the Dutch education system[9], both sponsored equally by the Dutch state. Most private schools have been established and are governed by religious/ideological associations/foundations. The majority of these is Protestant or Catholic, but there are also Jewish, Muslim, Hindustani and anthroposophist schools. In addition, some private schools base their teaching on specific educational ideas, or are otherwise non-denominational. Privately run schools have the option to refuse to admit pupils whose parents do not subscribe to their belief or ideology. Some 70% of pupils attend privately run schools (EURYDICE, 2001). Public schools are run by the municipal executive or (since 1997) by another body governed by public law to which this authority has been delegated. Schools' freedom of teaching is limited by qualitative standards set by the Department of Education, Science and Culture. These prescribe the subjects to be studied, attainment targets, syllabuses and the content of national examinations, required teacher qualifications, and regulate a number of other matters as well. School choice for pupils/parents is free, provided pupils meet general admission requirements for their school type, and their (parents') views do not conflict with the denomination of a chosen privately run school.

Third, education is strongly institutionalized as a separate and relatively autonomous societal sector, with strongly professionalized occupations and a broad array of sector-specific organizations and interest groups, which has been described with the phrase 'the pedagogical province'. For each sector within the education system, there are consultative bodies in which the Department consults with representatives of relevant parties. For example, representatives of (associations of) school boards, teaching staff, head teachers, parents and pupils for primary and (junior/general) secondary education are included in the Consultative Committee for Primary and Secondary Education. The Education Council ('Onderwijsraad') is a general education advisory committee advising government and parliament (both pro-actively and reactively) on educational matters. And there is a separate Science and Technology Advisory Council as well[10].

Fourth, the system is meritocratic. It fulfills three functions: to prepare students for different social roles; to provide equal educational chances; and to allow full development of the individual. But progress through the educational system simultaneously entails an almost continuous selection process. As in Germany, after primary education, lower secondary education is differentiated, and disperses 12-year-olds across different types of school distinguished by their level of intellectual complexity and the subsequent further education types they give access to. In particular the 1968 Secondary Education Act (the so-called 'Mammoth Act') aimed to prevent early differentiation from resulting in dead ends and eased mobility between separate school types: after completing lower types, young persons can enroll in higher types (cf. section 5.3.2). Adults who have failed to acquire a general

secondary diploma during their youth can get a second chance in adult education (cf. section 5.3.3).

Figure 5.1 presents the Dutch educational system in 2001 (EURYDICE, 1991). While some subsystems have changed or been integrated, the main characteristics have remained the same over the last few decades. Primary education is unsegmented until age 12. However, lower secondary education is differentiated. The most challenging types ('Voorbereidend Wetenschappelijk Onderwijs' or VWO and 'Hoger Algemeen Voortgezet Onderwijs' or HAVO) prepare for tertiary education (university and higher vocational education or HBO, respectively). The other type ('Voorbereidend Middelbaar Beroepsonderwijs' or VMBO) prepares for upper secondary vocational education or apprenticeship[11].




1) In bold: compulsory education
2) professional training, middle management training and specialist training
3) basic vocational training: no admission requirements, following on the basic vocational programme of vmbo

4) training to assistant level: no admission requirements, length 6 to 12 months

VWO and HAVO school year 1-3 and VMBO school year 1 and 2: basic secondary education

*Source: EURYDICE (1990)*

| | |
|---|---|
| speciaal onderwijs | Special education |
| voortgezet speciaal onderwijs | Id. |
| basisonderwijs and speciaal basisonderwijs | Mainstream primary schools and special schools for primary educations together make up the the primary education sector |
| praktijkonderwijs | Practical training for pupils who are not expected to obtain a VMBO certificate |
| VMBO | Pre-vocational secondary education |
| HAVO | Senior general secondary education |
| VWO | Pre-university education |
| MBO | Secondary vocational education |
| HBO | Short courses of higher professional education |
| Kort HBO | University education |
| WO | |

Education is compulsory full-time from age 5[12] to 16[13]. Since 1971, there has been an additional part-time requirement for two days per week for 16-year olds who no longer attend school full-time, until the end of the school year in which they turn 17 (Visser & Römkens, 1994: 20; 36; www.minocw.nl/leerplicht/leerplicht.html; EURYDICE, 2001). This two day requirement for school attendance is lowered to one day if this part-time attendance concerns (related) instruction in apprenticeship (www.minocw.nl/leerplicht/leerplicht.html; EURYDICE, 2001).

Compulsory education is free of charge, although schools tend to request voluntary parent contributions which parents tend to pay. Parents of children under 18 receive child benefit, and can apply for additional financial help in sending their minors to schools. Pupils aged 18 or over qualify for a basic allowance for living costs, and can qualify for additional allowances for fees and other costs of studying dependent upon their parents' income. And full-time upper secondary VET and tertiary education students aged 18-34[14] are entitled to a non-means tested basic grant, and may claim a supplementary grant depending upon their parents' income, for the normative duration (usually, four years) of their studies[15]. Grants may vary dependent on the type of education and whether the student lives with his/her parents or on his/her own. These are performance-related grants, which start out as a loan, but are turned into a grant provided students achieve a minimum number of credits in the first year and obtain their final degree within ten years. Students may take out an interest-bearing loan for an additional three years, should they need one (EURYDICE, 2001).

### 5.3.2 General secondary education

The 1968 Secondary Education Act (popularly known as the 'Mammoth Act') integrated an array of previously existing separate acts for various types of school into a single piece of legislation, apprenticeship training remaining outside its scope. It introduced one new type of secondary education (HAVO, to be discussed below). Higher professional education (HBO) was originally included, but was removed from it in 1986 to become an integral part of tertiary education (section 5.3.4). Senior secondary (school-based) vocational education was also originally included in the

act and has since then become a separate system (together with apprenticeship) under a new 1996 Act (section 5.3.4).

A major aim of the 1968 Secondary Education Act was to increase mobility between the various parts of the system. One could and can proceed from junior secondary education ('Lager Beroepsonderwijs' or LBO, since 1992 VBO, since 1999 integrated in VMBO, see below) through upper secondary VET ('Middelbaar Beroepsonderwijs' or MBO) to tertiary education ('Higher Professional Education' or HBO) and, subsequently and ultimately, to university). The route from VMBO to MBO and HBO is known as the 'vocational column' in Dutch education. It offers the possibility for upward mobility for those who ended up in the less demanding types of lower secondary education, and ensures that the majority of students leave the education system with not just general, but also specific vocational skills. Increasing the internal efficiency of this vocational column, among other things by increasing cooperation and linkages between the various school types, is a prominent current policy theme, in part to remedy current and expected skilled labor market shortages at the intermediate and higher levels (cf. www.minocw.nl/beroepskolom/index.html; EURYDICE, 2001).

There are currently three types of secondary education, from which pupils choose upon leaving primary education (presumably at age 12): pre-vocational secondary education (VMBO), senior general secondary education (HAVO) and pre-university education (VWO). Most secondary schools offer two or all of these types. Since 1993, all the types of (junior) secondary education start with a two to three year period of basic secondary education during which all pupils study the same broad range of subjects, regardless of the school type in which they are enrolled. Completion of basic secondary education is certified. Year-to-year progression is conditional upon performance, and students may have to repeat a year, or may be promoted on a conditional basis.

VWO lasts six years (typical age group: 12-18 year olds) and aims to prepare its graduates for university education; in practice, however, many students opt for HBO instead. HAVO lasts five years (typical age group: 12-17 year olds) and prepares its students for higher professional education in HBO; but many of its graduates opt to pursue a university education instead. This road is open through either additional VWO graduation or through the first year of HBO, which also grants university access. A further group of HAVO graduates opts for upper secondary VET. VWO and HAVO both consist of a three year first stage and a second stage. There are no examinations or other boundaries between the stages, but the transition entails a choice for one or four subject combinations for the second stage. Each combination includes a common component across all combinations (almost one half of the curriculum), a specialized component (a third of the curriculum) and an optional component[16]. VWO schools come in three specific types: grammar schools, the 'gymnasium' where (classic) Greek and Latin are required, 'atheneum' where they

are not, and the 'lyceum' which combines both types. Graduation examinations consist of a national examination held in the final year and a school component.

VMBO has only existed since 1999. It replaces two previous, separate types of lower secondary education: junior general secondary education ('Middelbaar Algemeen Vormend Onderwijs' or MAVO) and pre-vocational education ('Voorbereidend Beroepsonderwijs' or VBO). Pre-vocational education itself was the heir to junior secondary vocational education ('Lager Beroepsonderwijs' or LBO). Historically, LBO/VBO offered technical and other vocational education to the least talented primary school graduates, preparing them for direct labor market entrance (as an apprentice or a regular worker) at age 16. It has suffered from its perception as the lowest type of junior secondary education which made it unpopular with pupils and parents, and labor market prospects of its graduates waned as entry-level skills requirements gradually rose to demand (some) senior secondary VET (apprenticeship or MBO). MAVO was a less demanding form of HAVO, whose graduates could continue in a school-based senior secondary VET system (MBO). In the wake of the 1996 integration of MBO and apprenticeship into one coherent upper secondary vocational education system (section 3.3.4 and 3.6), and to improve the number of students continuing from junior secondary education to senior secondary VET, it became logical to integrate LBO/VBO and MAVO into a specific preparatory system. The 1999 result was VMBO, which, like its ancestors, takes four years to complete. VMBO is specifically intended as a basis for further vocational training in senior secondary vocational education or, for those opting for the theoretical pathway, for further general education in HAVO. Pupils choose one of four different sectors (engineering and technology; care and welfare; business; agriculture) and a particular pathway (theoretical, combined, middle management or basic vocational) for their final two years. In addition, they can choose for a vocationally-oriented program within their pathway (except those in the theoretical pathway who study general subjects). Pupils can either specialize within one particular pathway, or delay such specialization by opting for an inter-sector program providing training across a broader range. The theoretical pathway gives access to levels 3 and 4 of senior secondary VET (cf. section 3.3.4 and 3.6) and HAVO (if it includes mathematics and German or French; there may be additional requirements). The combined as well as the middle management pathways give access to levels 3 and 4 of senior secondary VET. The basic vocational pathway gives access to level 2 of senior secondary VET. If pupils include mathematics, they can opt for subsequent upper secondary VET regardless of their specialization in a particular vocational area. Graduation examination consists of a school examination and a national examination. The latter includes a written component for everybody, and a practical component for those enrolled in the basic vocational or middle-management pathway.

In 2000-2001 there were 834 general secondary schools. 28% of them were

public, 22% Protestant, 29% Catholic, 11% private non-denominational, and 10% interdenominational (EURYDICE, 2001). Most secondary teaching takes place in schools combining these different types of schools. And such combined schools often put their pupils in combined classes of two school types for the first year or so, which in practice postpones the process of school type choice over a year.

Decisions concerning admission to secondary schools are made by the school board or a specific admissions board. Prospective primary school graduates are assessed to establish their suitability for the different school types, 86% of primary schools using the test of a nationally acclaimed institute. Primary schools then advise parents on the type of secondary school for which their child appears best suited, based upon the attainment test results as well as general educational performance, interests and motivation. Assessment results and primary school advice provide the basis for secondary school boards to make their decisions.

A Basic Secondary Education (Attainment Targets and Recommended Number of Periods per Subject) Decree sets attainment targets for these school types and the recommended number of periods per subject. The Secondary Education (Organization of Teaching) Decree regulates teaching in the different school types, including admission requirements. The VWO-HAVO-MAVO-VBO School-leaving Examinations Decree regulates the choice of examination subjects, and stipulates how examination results are to be determined (EURYDICE, 2001).

### 5.3.3 Senior secondary VET

Initial VET in the Netherlands used to consist of two separate subsystems: 'middelbaar beroepsonderwijs' (MBO) and apprenticeship. About two-thirds of vocational training students participate in school-based VET (MBO), while one-third takes part in apprenticeship training. In addition, there were a variety of schools for adult education. There were different laws applying to each of these types of education and training, and separate schools that delivered it (i.e. its school-based component). MBO had been governed by the Secondary Education Act since 1968, while apprenticeship was governed by the Apprenticeship Act from 1966 to 1993, and (jointly with part-time MBO) under a Part-time Vocational Education Act from 1993 to 1996. MBO offered 2-4 years' education, primarily school-based tracks, many of which came to include an internship component over time. The apprenticeship system offered primarily work-based training, accompanied by related instruction for 1-2 days at a publicly funded school. Employers' associations and unions have always been heavily involved in the regulation of apprenticeship within their sector. They operated so-called national bodies for apprenticeship ('landelijke organen voor het leerlingwezen') that set skills standards for apprenticeship training occupations, counseled training firms and apprentices, developed examinations and awarded diplomas. We will elaborate on the old situation in section 5.5.

Since the eighties, a continuous reform process has evolved to improve and integrate the various vocational (and adult) education systems. It culminated in the new Vocational and Adult Education Act ('Wet Educatie en Beroepsonderwijs' or WEB) that came into force on January 1st, 1996 (cf. Ministry of Education, Culture and Science, 1996; Van Hoof, 1998). The Act seeks to improve the operation of the VET market through decentralization and deregulation. It decentralized various responsibilities from the Ministry of Education, Culture and Science to the new regional education centers ('regionale opleidingencentra' or ROCs)[17]. These were formed through mergers between different vocational and adult education schools in each region. There are two types of ROCs: those in which the previous schools have completely merged, or those in which only the management has merged. They offer related instruction for apprentices, (primarily) school-based vocational education, and adult education for all economic sectors. These publicly funded ROCs do not have a monopoly on providing VET; provided they meet certain requirements, private training institutes can also train for the same diplomas – without the public funding, however. The goal of the WEB is to achieve "a self-regulating system in which the various actors in the field of education are in balance with one another" (Ministry of Education, Culture and Science, 1996: 5).

VET provided by ROCs is sponsored by the state based upon a 2000 funding model. This is based upon the following parameters: student numbers, graduate numbers, as well as the volume of educational preparation and support. Work-based training is sponsored by firms, which do qualify for substantial state subsidies/tax cuts and (often) subsidies from sector training funds (cf. section 5.5.2). Adult education is also sponsored by a state budget, but this is divided among municipalities who buy adult education packages from ROCs. In addition, ROCs provide contract training for firms and unemployed[18].

For vocational education, the WEB distinguishes five types of programs at four different qualification levels: assistant (level 1; 6 to 12 months), basic skilled worker (level 2; 2 to 3 years), skilled worker (level 3; 2 to 4 years), and middle management (level 4; 3 to 4 years) or specialist (level 4; 1 to 2 years). These are in line with the first four levels of the European SEDOC qualification classification system:

Figure 5.2: Qualification levels and types of pathways in Dutch senior secondary VET

| *level* | *qualification type* | *training goal* |
|---|---|---|
| level 1 | assistant | competence in simple operational work |
| level 2 | basic | competence in operational work |
| level 3 | skilled worker | can work competently and independently |
| level 4 | middle management | can work competently and independently in a broad area |
| level 4 | specialist | can work competently and independently, and is specialized in a particular field |

Admission to level 3 tracks and level 4 middle management tracks required a LBO/MAVO diploma, VMBO diploma (except basic vocational pathway) or proof of completion of the first three years of HAVO or VWO. Admission to level 4 specialist tracks requires a corresponding level 3 qualification. Level 1 and 2 tracks have no admission requirements in terms of previous education[19].

19[20] sector-specific knowledge centers of vocational education for trade and industry ('landelijke organen voor het beroepsonderwijs' or LOBs, later renamed 'kenniscentra beroepsonderwijs bedrijfsleven' or KBBs), in which employers' associations, unions and education representatives cooperate, develop national skills standards for all the programs in their sector[21]. These LOBs/KBBs are also sponsored by the state. Each program is governed by one set of skills standards, which is referred to as an 'exit qualification'. Jointly, these 600 (http://www.colo.nl) to 700 (EURYDICE, 2001) exit qualifications and 140,000 (http://www.colo.nl) related skills standards are referred to as the 'national qualification structure'[22], and entered into the Central Register of Vocational Courses ('Centraal register beroepsopleidingen' or CREBO). They indicate in general terms what is expected of students. Each exit qualification has to take into account three elements: a vocational element (the ability to do the job), a general/socio-cultural element (ability to function as a citizen in society), and a transfer element (the ability to continue one's education on the next qualification level). Each exit qualification is broken down in a number of partial qualifications ('deelkwalificaties'); and each partial qualification is defined in terms of a set of educational goals ('eindtermen'). There is a certificate for each partial qualification, which students get if they pass a test. All certificates together lead to the diploma for the exit qualification. In addition to this central task of skills standard development, KBBs have to guarantee the quality and availability of work-based training positions. Training firms must meet criteria set by the KBB, and are then entered into their register of recognized training firms. 170,000 firms gave been entered as such (http://www.colo.nl).

These qualifications, and the partial qualifications and sets of skills standards they contain, are developed through the following process. First, employers' associations

and unions design occupational profiles for their sector. For each occupation they list the key tasks and the skills required to perform them. As much as possible, they will incorporate future developments in this process. Second, the relevant LOB develops the skills standards for these profiles. It also proposes whether the exit qualification can be acquired through a vocational training and/or apprenticeship pathway (see below); for which of the partial qualifications tests have to be externally verified; and for which of the exit qualifications training programs should be eligible for public funding. This entire proposal first goes to a newly created national advisory committee: the Advisory Committee Education-Labor ('Adviescommissie Onderwijs-Arbeidsmarkt' or ACOA). The ACOA examines all proposed exit qualifications and the related skills standards in the light of equal requirements. Subsequently, the (possibly somewhat revised) skills standards document is submitted to the Minister of Education, Culture and Science, with an extensive explanation of the LOB, and the advice from ACOA. The Minister has the final say, and will authorize the skills standards and decide on related matters (pathways; external verification; public funding). All exit qualifications and the related skills standards are then incorporated into the CREBO.

ROCs are free to organize their own training programs in order to train people to acquire a particular diploma. For instance, they can spread out the program (that has a given study load within particular, legally prescribed boundaries) over more or fewer years. Testing and examination of students is the responsibility of the schools. But for the smallest possible majority of all certificates, the tests have to be 'externally verified' by an independent examination organization (which can be the KBB, or another organization). The latter has to ensure that contents and level of the tests are in line with the education goals formulated for the partial qualifications at hand.

Each exit qualification can in principle be achieved through one of two pathways: a vocational training pathway ('beroepsopleidende leerweg' or BOL; primarily school-based, but including an internship component of at least 20%) and an apprenticeship-training pathway ('beroepsbegeleidende leerweg' or BBL; which includes a work-based component of 60% or more)[23]. It is up to the LOB to decide whether a particular exit qualification is offered in just one, or both, pathways. Almost half of all exit qualifications can be achieved through both a vocational training and an apprenticeship pathway (SER, 1999; EURYDICE, 2001); these are then governed by exactly the same set of skills standards. The work-based component for both pathways requires a contract between ROC, student, and training firm. For BBL, the LOB also has to sign, its signature implying that the firm has been evaluated by the LOB as able to provide work-based training of sufficient quality for the particular qualification.

Students pay course fees but are eligible for a larger state grant when participating in BOL (cf. section 5.3.1) or receive an apprenticeship wage from their training firm,

which is typically regulated in a collective bargaining agreement. Firms are often partially or completely reimbursed for their training costs through a combination of an allowance from a sector training fund, and a tax cut. Interns (school-based MBO students during their work-based component) may or may not receive a financial allowance from their internship firm - which implies that the cost of apprentices is higher for training firms than that of interns.

Adult education consists of three segments. General adult secondary education ('Voortgezet Algemeen Volwassenenonderwijs' or VAVO) offers a second chance to acquire a regular general secondary education diploma for those adults who haven't one. Adult basic education offers a basic first step towards further education and training. And Dutch as a second language is the third component. VAVO and adult basic education are governed by a separate adult education qualification structure, the details of which we will not go into.

The entire vocational and adult education sector ('beroepsonderwijs en volwasseneneducatie' or BVE) consisted of 61 separate schools in 2002. Besides 43 ROCs offering a full range of vocational and adult education, these include 13 specialist schools targeted to specific branches of industry, two schools exempted from the ROC requirement because of a specific denominational basis, one attached to an HBO college, and two schools attached to institutes for the deaf (http://www.minocw.nl/english/figures2003/060.html). The number of ROC students averages around 10,000, varying from 2,000 to 24,000. Data on VET and corresponding labor market participation will follow in section 5.4, and we will analyze the evolution of the Dutch VET governance regime over time in more detail in section 5.5.

### 5.3.4 Tertiary education

The second half of the twentieth century has seen a massive growth in higher education participation in the Netherlands. University participation particularly exploded between 1960 and 1975, while higher professional education participation expanded particularly rapidly in the seventies, after it had been brought under the Secondary Education Act. Currently, universities and HBO are regulated by the 1993 Higher Education and Research Act, amended by the 1996 Quality and Practicability Act. It regulates the structure of courses and institutions, examination regulations, staff, planning, funding, and internal college democracy; and it sets parameters for the organization of teaching, entry requirements, and study loads. A Higher Research and Education Plan sets out the government agenda for higher education policy for a four year period. In 2000, there were 13 universities and 56 colleges for higher professional education, enrolling 161,000 and 298,700 students respectively (EURYDICE, 2001).

HBO offers higher professional education in seven areas: education, economics, social studies, language and culture, engineering and technology, agriculture and

the natural environment, and health care. Admission to HBO requires a HAVO or VWO diploma, or a level 4 upper secondary VET diploma[24]. For those aged 21 or over, admittance is possible after passing an entrance examination. HBO colleges can set their own additional entry requirements in terms of specific subject combinations required for particular courses. There are full-time, part-time and (a small but increasing number of) dual pathways[25]. Full- and part-time courses generally include a work-based (internship) component. Teaching is loosely guided by a framework set by the government, upon which individual colleges have to elaborate in teaching and examinations regulations. Examinations are organized by the colleges.

Universities offer academic tracks in seven sectors: economics, health, social sciences, science, law, engineering and technology, and language and culture. University admission requires a VWO diploma or an HBO propaedeutic certificate[26], while universities are able to set additional entry requirements in terms of specific subject combinations required for particular courses, and the possibility of passing an entrance examination for (over) 21 year olds lacking a required diploma. There are both full-time and part-time tracks, some of them with a work-based (internship) component. Dual pathways have been introduced on an experimental basis since 1998. Teaching and examinations are organized by the universities.

Recently, Dutch higher education has switched to a bachelor-master structure in the wake of an E.U. agreement. University bachelor's courses are generally 3 years, master courses 1 (together, equivalent to the previous four year courses). HBO courses have become four year bachelor's courses. HBO colleges can also offer master courses, but these are not publicly funded contrary to the university masters. Each university and HBO college needs to have its courses accredited by a National Accreditation Institute, which will review them on a six year basis based on assessments by visiting committees.

### 5.3.5 Further training in the Netherlands: private initiative and social partners

Further training is largely a matter of private initiative. It may be supplied by firms themselves, by publicly funded schools/colleges, and by various private training institutions. In this sense, one can analyze this market for incumbent worker training as non-regulated, and a lack of transparency has been quoted as one of its weaknesses (cf. Dercksen & Van Lieshout, 1993).

It must be recognized, however, that in many sectors the involvement of the social partners with training issues has done much to combat both the transparency issue, and the threat of underinvestment in broader training. Many sectors have their own training institutes that offer further training credentials (and offer training to prepare for them) that are widely recognized within that sector. Sometimes this task was/is performed by the same national body that regulated the apprenticeship

system and currently acts as KBB for senior secondary VET; sometimes it is a separate institute (for instance, NIBE in banking).

In addition, collective bargaining agreements tend to contain stipulations on training. Since the mid-eighties, both the number and nature of such training regulations in collective labor agreements have grown substantially. A study has explored 130 sector collective labor agreements with 5,000 or more workers, and company-level collective labor agreements with more than 2,000 workers; jointly, these agreements cover over 4.2 million workers (Arbeidsinspectie, 2000). This study has found the following stipulations in those agreements:

Table 5.1: training stipulations in Dutch collective bargaining agreement

| STIPULATION TYPE | % WORKERS COVERED |
|---|---|
| Training | 99% |
| Of which: | |
| - general training | 17% |
| - job-specific training | 97% |
| - apprenticeship (BBL) | 50% |
| - 'Dutch language on the shopfloor' | 8% |
| Training leave | 88% |
| Of which: | |
| - paid leave | 69% |
| - unpaid leave | 3% |
| - exam leave | 69% |
| - time saving for training leave | 17% |
| Development plans | 32% |
| Of which: | |
| - personal development plans | 14% |
| - firm development plans | 21% |

*Source: Arbeidsinspectie (1990)*

Stipulations regarding training and training leave can be seen as more traditional types of stipulations, while those concerning development plans are relatively new. Other examples of more recent types of stipulation are labor market related (e.g. the creation of a vacancy database), are diagnostic (e.g. establish systems to recognize previously acquired qualifications), are financial (e.g. personal

development budgets) or are career/mobility related (e.g. creation of a mobility center). These new types of stipulations indicate two trends (STAR, 2001b: 12). One is a trend towards the broadening of training policy from job- and firm-specific to a more general employability policy that transcends the individual firm. The other is a trend towards enabling tailor-made individual provisions, in line with a more general development towards framework-type of arrangements in collective labor agreements (cf. Tros, 2000). Accordingly, Dutch social partners are more strongly involved in further training issues than their German counterparts. The role of German social partners is strongly focused on apprenticeship, with less regulation or stimulation of further training.

## 5.4 The school-to-work transition in the Netherlands

Table 5.2 lists the number of graduates of various types of education. One important caveat is that the vocational training number is only the number of graduates from school-based MBO (BOL); numbers including BBL are presented below.

Table 5.2 Number of graduates from different types of school-based education, 1996-2001

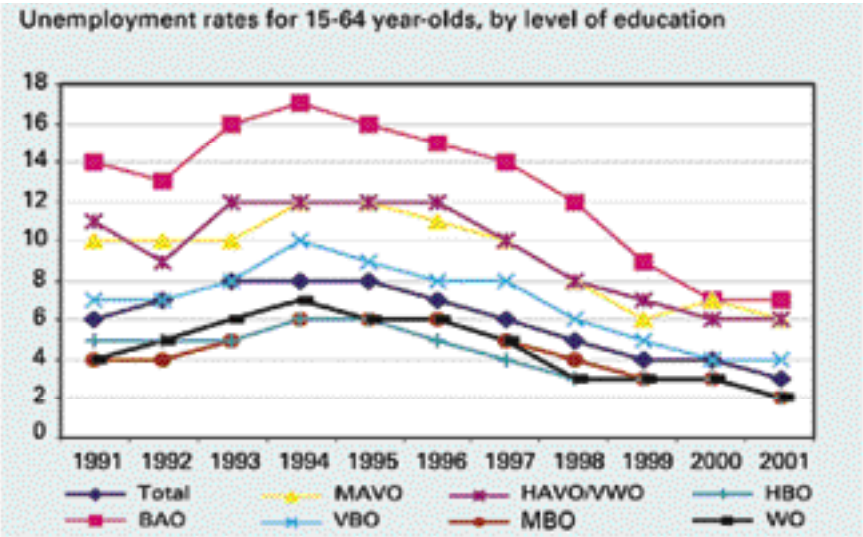
| Number obtaining qualifications (x1000) | | | | | | |
|---|---|---|---|---|---|---|
| | | 96/97 | 97/98 | 98/99 | 99/00 | 00/01 |
| Number obtaining qualifications | | | | | | |
| Secondary education | Total | 172.6 | 165.7 | 161.1 | 159.6 | 147.7 |
| | @ VBO | 56.6 | 55.8 | 52.4 | 50.4 | 49.4 |
| | MAVO | 53.2 | 47.4 | 44.6 | 45.2 | 42.4 |
| | HAVO | 25.1 | 24.8 | 27.0 | 28.0 | 29.6 |
| | VWO | 27.7 | 27.7 | 27.2 | 26.0 | 26.3 |
| Vocational training | Total | 65.3 | 68.5 | 71.4 | 70.0 | 72.3 |
| Higher professional education | Total | 53.7 | 52.6 | 53.2 | 54.7 | 55.2 |
| | Pr-HBO | 43.7 | 42.1 | 43.6 | 44.8 | 44.1 |
| | Pr-HBO | 10.0 | 9.5 | 9.6 | 9.9 | 11.2 |
| Universities | Total | 26.0 | 22.6 | 20.7 | 20.5 | 20.1 |

*Source: http://www.minocw.nl/english/figures2003/060.html)*

Since the Rauwenhoff Committee (Tijdelijke adviescommissie Onderwijs Arbeidsmarkt, 1990: cf. chapter 1 and section 5.5), the concept of a starting qualification (defined as an HAVO, VWO, MBO level 2 or higher diploma) figures as a prominent benchmark in Dutch education. The most obvious reason underlying this concept is that unemployment is concentrated among those who lack a diploma or

have one below that level (figure 5.3). We may observe, however, that unemployment among HAVO and VWO graduates is even higher than that among MAVO and VBO graduates, suggesting HAVO and VWO graduates had better continue in HBO, WO, or upper secondary VET, and underlining the importance of the last three types of education in easing the school-to-work transition.

Figure 5.3 Level of education and unemployment, 1991-2001




*Source: http://www.minocw.nl/english/figures2003/060.html)*

In the period of 1996-2001, the percentage of 18-24 year olds that lack a starting qualification fell from 17.6 to 15.3 (http://www.minocw.nl/english/figures2003/060.html), indicating a gradual progress in this respect (also cf. Geerligs et al, 2002). School drop-out rates (students leaving one type of education without a diploma and without transferring to another type of education) are higher. If we include the VMBO and MBO-level 1 graduates that do not continue in education, the drop-out rate would be approximately 30% of the total number of school-leavers. An important caveat, however, is that we don't know how many of these drop-outs re-enter education at a later stage and subsequently acquire a starting qualification.

VET participation has grown in the Netherlands. Expressed as a percentage of the 15-24 year old population, MBO/BOL participation grew from 14.4% to 15.8% and apprenticeship/BBL participation grew from 5.9% to 6.9% between 1992/1993 and 1998/1999 (Geerligs et al, 2002). In 2001-02, there were 441,000 participants in (senior secondary) VET. 58% were enrolled in BOL full-time, a further 7% in BOL

part-time, and the remaining 35% were enrolled in BBL (http://www.minocw.nl/english/figures2003/060.html). From 1997-1998 to 2001-2002, BBL participation rose from 119,700 to 153,400, while participation in full-time BOL declined slightly (from 267,400 to 255,600), as part-time BOL participation grew (from 23,100 to 31,600).

There has been an interesting difference in the development of participation at levels 1 and 2 versus levels 3 and 4. Compared with 1998/1999, the number of participants at levels 1 and 2 increased by 30% until 2001/2002, while the number of participants at levels 3 and 4 remained virtually the same. The same picture emerges when we confine ourselves to the intake of new students: the number of level 1-2 entrants rose with 17,000 (7,500 of which were accounted for by BOL-pt), whereas the number of level 3-4 entrants rose with only 6,500 (http://www.minocw.nl/english/figures2003/060.html).

Of all participants in vocational education, 38% was enrolled in the sector of economics, 34% in the sector of technology and 28% in the sector of personal and social services/health care. In BBL, technology is the largest sector (49% of all BBL participants). The economics sector has the largest number of BOL participants (43% of all BOL-ft participants in BOL-ft, 63% of all BOL-pt participants).

In 2000, 187,000 students left vocational education. 60% of them had obtained a certificate (from the course last attended), 40% had not. Some of the latter may have already obtained a certificate at a lower level in vocational education. The number of registered[27] early school-leavers in adult and vocational education in the 2000/2001 school year amounted to 19,000, which is 5% of the total number of participants registered; eventually, 48% of these were reinstated. Of the participants obtaining a certificate in BOL-ft, almost 30% moved on to HBO in 2000 (down from 32% in 1999). Across the board, almost three out of every four VET-leavers (with or without a certificate) left the education system altogether. 26% transferred within the education system: they transferred to another MBO course (14%), moved on to HBO (8%) or moved on to other types of education (4%) (http://www.minocw.nl/english/figures2003/060.html).

Table 5.2 lists the number of acquired VET qualifications by pathway from 1997-2001. Again, we see a more rapid rise for BBL than for BOL. The most remarkable characteristic, however, is that graduation numbers from BBL at levels 3 and 4 doubled over this period. The favorable Dutch economic and labor market conditions of the late nineties were presumably part of the explanation. With 13,000 early school-leavers from BBL as compared to 18,000 from BOL in 2000, the relative performance of BOL seems better in this respect, given the relatively larger number of BOL participants.

Table 5.3: Number of senior secondary VET qualifications acquired by pathway, 1997-2001

| Results in vocational education | | | | | |
|---|---|---|---|---|---|
| | 1997 | 1998 | 1999 | 2000 | 2001 |
| Total | 108.4 | 106.3 | 108.1 | 112.8 | 116.6 |
| BBL | 33.8 | 36.1 | 36.5 | 42.9 | 44.1 |
| Level 1-2 qualifications | 20.9 | 20.5 | 19.3 | 22.2 | 22.7 |
| Level 3-4 qualifications | 12.9 | 17.6 | 17.2 | 20.8 | 21.4 |
| BOL-ft | 61.3 | 64.5 | 67.2 | 65.7 | 68.0 |
| Level 1-2 qualifications | 11.7 | 13.8 | 14.8 | 16.0 | 15.0 |
| Level 3-4 qualifications | 49.6 | 50.7 | 52.3 | 49.8 | 53.0 |
| BOL-pt | 5.3 | 3.8 | 4.5 | 4.1 | 4.7 |
| Level 1-2 qualifications | . | 0.0 | 0.2 | 0.5 | 1.2 |
| Level 3-4 qualifications | 5.3 | 3.7 | 4.3 | 3.7 | 3.5 |

*Source: http://www.minocw.nl/english/figures2003/060.html).*

From 1997 to 2001, favorable economic development has led to a large shortage in staff. There has also been a severe shortage of upper secondary education graduates. This shortage is reflected in the low unemployment figures. Less than 2% of upper secondary VET graduates are unemployed one and a half years after graduating (table 5.4).

Table 5.4: Social position of senior secondary VET graduates, 1997-2001

| Social Position of MBO certificate holders, 1997-2001, in percentages | | | | | |
|---|---|---|---|---|---|
| | 1997 | 1998 | 1999 | 2000 | 2001 |
| Total | 100 | 100 | 100 | 100 | 100 |
| Paid employment | 66 | 66 | 68 | 68 | 71 |
| Unemployed | 2 | 2 | 2 | 1 | 1 |
| Student | 32 | 30 | 28 | 28 | 24 |
| Other | 0 | 2 | 3 | 2 | 4 |

*Source http://www.minocw.nl/english/figures2003/060.html).*

Salaries have risen sharply as a result of this (table 5.5). In 2001, school-leavers earned some 30% more than school-leavers did in 1997. In 2001 this increase was the largest: approximately 10%. This sharper increase in salaries in 2001 is linked

to both the shortage on the labor market and to increasing inflation. This may partly explain the drop from more than 30% of VET graduates continuing their education in 1997 to less than 25% by 2001 (table 5.4).

Table 5.5: Labor market position of employed senior secondary VET graduates, 1997-2001

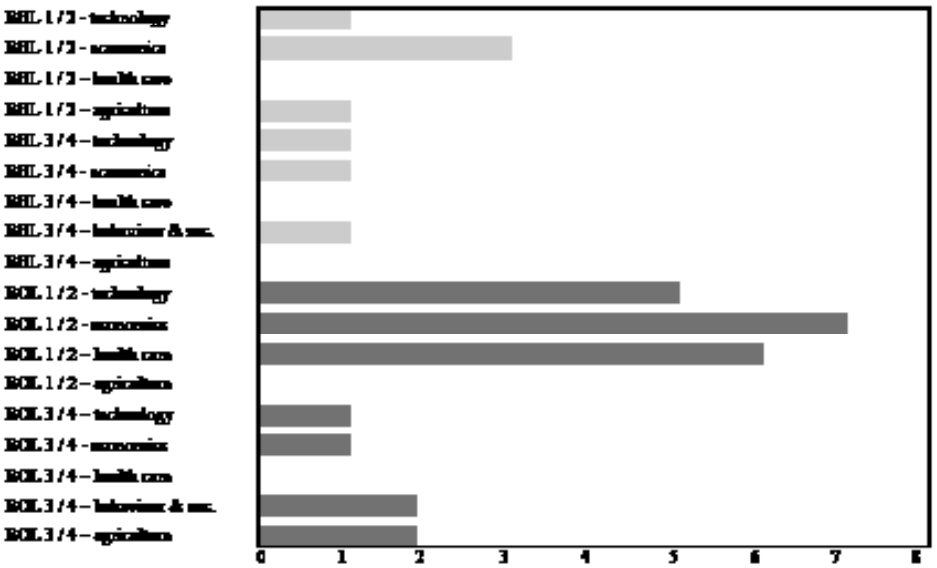
| Labour market position of employed MBO certificate holders, 1997-2001 | | | | | |
|---|---|---|---|---|---|
| | 1997 | 1998 | 1999 | 2000 | 2001 |
| Flexible employment contracts (in perc.) | 23 | 18 | 15 | 12 | 11 |
| Median Gross hourly wages (in euro) | | | | | |
| BBL level 1/2 | 6.28 | 7.23 | 7.64 | 7.98 | 7.71 |
| BBL level 3/4 | 7.64 | 8.31 | 9.02 | 9.45 | 10.45 |
| BOL level 1/2 | 4.58 | 5.11 | 5.64 | 5.80 | 6.54 |
| BOL-level 3/4 | 6.54 | 7.12 | 7.46 | 7.85 | 8.50 |

*Source http://www.minocw.nl/english/figures2003/060.html).*

Apprenticeship/BBL graduates have generally faced an easy apprenticeship-to-work transition, even when compared with MBO/BOL graduates, who show more mobility (including some periods of unemployment) in their early careers (figure 5.4). BBL graduates tend to find work more quickly, are given a permanent position sooner, and earn more than those with a BOL certificate. The other side of the coin is that BBL graduates tend to be more dissatisfied with the level of their first job. Of all the BBL certificate holders surveyed, only 38% think that the level of the training program fits in well with the job. Among BOL participants, this is 66% (http://www.minocw.nl/english/figures2003/060.html). Moreover, earlier research has found that (school-based) MBO graduates have had better long-term career prospects in terms of upward mobility (cf. Van der Velden & Lodder, 1993).

Figure 5.4: Unemployment among BOL and BBL graduates, 2001

**In percentage, by sector, educational route and level**




*Source http://www.minocw.nl/english/figures2003/060.html).*

Similar results were reported by De Vries & Wolbers (2002) for an earlier generation of (1997-1998)[28] VET graduates. More importantly, multivariate analysis allows them to establish the extent to which such differences are indeed partially explained by the participation in different pathways, rather than by other factors. They find no significant differences between graduates from both types of pathways in terms of employment chances, possibly due to the very tight labor market situation at that time. While apprenticeship graduates more often have permanent contracts than MBO graduates, the difference vanishes in a multivariate analysis. However, one of the variables that account for this fact is whether graduates have combined paid employment with their training (either a dual track, or an internship in a school-based track). If they have, they stand a higher chance of acquiring a permanent contract. Graduates from apprenticeship tracks do have higher gross wages a year and a half after graduation than graduates from school-based tracks, even if one takes into account their advantage in work experience (in other words, the fact that they have made a head-start in terms of wages through their employment during training). The school-based pathway graduates, on the other hand, are more often employed in a job matching their qualification level and occupation than apprenticeship graduates. De Vries & Wolbers (2002) conclude that, contrary to the policy goal of equivalent pathways, significant differences do exist in terms of

subsequent employment quality (i.e. wages and quality of the job-training match). BOL and BBL are equivalent only in terms of chances of employment chances and the chances of a permanent rather than temporary contract, a fact which may have more to do with the extremely tight labor market and low unemployment figures for the entire group at the time. It remains to be seen if differences in these respects between the pathways emerge in a less tight labor market.

The labor market for graduates of programs at levels 3 and 4 is generally good, as unemployment is very low (table 5.6). The sectors of technology and health care are particularly promising, with relatively high salaries, low numbers of flexible contracts, and a high percentage of jobs corresponding to the VET specialization. The economics sector is relatively lagging behind, with BBL levels 3-4 graduates earning € 3 per hour less than their contemporaries with health care training. The labor market position of level 1 and 2 graduates is weaker, although (in these economically more favorable years) it does not show very much in unemployment figures.

Table 5.6: Labor market position of senior secondary VET graduates by sector and by level, 2001

**Labour market position of employed MBO certificate holders, 1997 - 2001**

| | Behaviour & Society | Health care | | Economics | | Technology | | Agriculture | |
|---|---|---|---|---|---|---|---|---|---|
| | Level 3/4 | Level 1/2 | Level 3/4 | Level 1/2 | Level 3/4 | Level 1/2 | Level 3/4 | Level 1/2 | Level 3/4 |
| **A) Unemployment (in %)** | | | | | | | | | |
| BBL | 1 | 0 | 0 | 3 | 1 | 2 | 1 | 1 | 0 |
| BOL | 2 | 6 | 0 | 7 | 1 | 5 | 1 | 0 | 2 |
| **B) Initial unemployment (in %)** | | | | | | | | | |
| BBL | 6 | 0 | 1 | 4 | 2 | 2 | 2 | 1 | 0 |
| BOL | 7 | 9 | 3 | 12 | 3 | 8 | 4 | 10 | 5 |
| **C) Flexible employment contracts (in %)** | | | | | | | | | |
| BBL | 8 | 9 | 4 | 12 | 7 | 7 | 6 | 10 | 7 |
| BOL | 17 | 16 | 7 | 24 | 15 | 18 | 12 | 24 | 14 |
| **D) Employment below qualifications (in %)** | | | | | | | | | |
| BBL | 32 | 37 | 21 | 69 | 51 | 48 | 67 | 61 | 53 |
| BOL | 25 | 44 | 25 | 62 | 32 | 40 | 25 | 61 | 47 |
| **E) Employment outside own vacation (in %)** | | | | | | | | | |
| BBL | 17 | 28 | 17 | 56 | 42 | 30 | 25 | 57 | 32 |
| BOL | 25 | 25 | 19 | 55 | 37 | 38 | 25 | 52 | 37 |
| **F) Median gross hourly wages (in euro)** | | | | | | | | | |
| BBL | 9.34 | 6.57 | 11.34 | 6.73 | 6.69 | 8.58 | 10.02 | 7.85 | 8.64 |
| BOL | 8.89 | 6.81 | 8.41 | 6.47 | 7.85 | 8.89 | 9.02 | 4.26 | 7.51 |

*Source http://www.minocw.nl/english/figures2003/060.html).*

Comparing OECD figures on apprenticeship participation for 18 and 22 year olds in 1994, we may observe an interesting difference between the Netherlands and

Germany (OECD, 1996b: 118-119). Apprenticeship participation in Germany is, as we have seen in chapter 3, concentrated among youths in their late teens: 39.1% of 18 year old men and 29.6% of 18 year old women participated in some form of apprenticeship in 1994, as compared to 7.5% and 7.6% of their 22 year old counterparts. Dutch apprenticeship participation is less concentrated among youths in their late teens, and more evenly spread over youths and young adults: 9.4% of 18 year old men and 9.1% of 22 year old women participated in some form of apprenticeship in 1994. 22 year old Dutch women even participate substantially more in apprenticeship than their 18 year old counterparts: 8.2% versus 4.0%. The average age of the participants in BOL-ft was 18; in BBL it was 24 and in BOL-pt it was 29. This indicates that Dutch apprenticeship is less exclusively a direct school-to-work transition market than its German counterpart. Further evidence is the fact that 57% of BBL participants do not come directly from any other type of education (http://www.minocw.nl/english/figures2003/060.html). Dutch apprenticeship/ BBL thus seems to mix a distinct role in initial VET and the direct school-to-work transition, which is similar to the German apprenticeship system, with a second role in further training for workers similar to the Wisconsin apprenticeship system.

## 5.5 Dutch VET governance: the gradual evolution of a WEB of apprenticeship and school-based tracks

### 5.5.1 The original VET systems

#### 5.5.1.1 Apprenticeship

Like German apprenticeship, Dutch apprenticeship has its roots in the medieval guild system. The Dutch guilds, however, were abolished under the French occupation, during Napoleon. Around 1875, local employers' associations started to reconsider work-based training alongside the gradually developing school-based VET system, resulting in the foundation of (large) firm-based apprenticeship systems from the 1880s on; the first trade apprenticeship systems originated in 1884 and 1907 (Bakker, 2001: 55-57). But numbers were low: a mere 132 apprentices by 1915. Apprenticeship was regulated by law in 1919. The law saw apprenticeship as additional to the contemporary ancestor of LBO ('ambachtschool'), for those areas with insufficient numbers of LBO schools, and the relative status of apprenticeship was that of an inferior alternative to those schools. Apprenticeship numbers grew to 3000 by 1930 (many of them in the printing industry), and its status gradually improved, as full-time schools were unable to keep up with VET demand. Apprenticeship training was organized by associations, either regional associations organizing more sectors, or sector associations (Bakker, 1995: 55-57).

After World War II, apprenticeship became an ingredient towards the

reconstruction of country and economy (Bakker, 2001: 78-83). Several advisory committees consisting of educational and pedagogical scientists and especially employers' associations and unions advised on the matter. A 1947 vocational education committee of the Labor Foundation proposed a sector level organization of apprenticeship, and the inclusion of a requirement to conclude training contracts in collective bargaining. It resulted in the formation of national bodies for apprenticeship per sector, which produced work-based training programs and exams ('landelijke organen voor het leerlingwezen' or LOLs). Regional bodies were to organize apprenticeship placement, related instruction, and social-pedagogical counseling of apprentices and their firm trainer (Bakker, 2001: 78-83). Apprenticeship gradually changed from an alternative for school-based VET towards the final qualification for skilled workers. Numbers rose to 19,000 apprentices by 1950, to 34,000 by 1955 (which corresponded to 10% of employed 14-20 year old young people) and 72,000 by 1965 (Bakker, 2001: 78-83; 93). Related instruction came to be recognized as a separate type of education. It became increasingly organized during the day rather than for evening classes, and specific schools for related instruction were developed on an experimental basis (Bakker, 2001: 93-96).

These developments resulted in a new 1966 Apprenticeship Law. It consolidated the previously developed structure of national and regional bodies. It thus saw to contents and examinations, rights and duties of apprentice (articles 13) and firm trainer (articles 8 and 12), and required apprentices to participate in related instruction (article 14) that itself became regulated in the 1968 Mammoth Act[29] (Van Lieshout & Van Liempt, 1999: 124-125; Bakker, 2001: 93-96). While the 1969 German BBiG constitutes apprenticeship contracts as a separate type of contract, concluded for the duration of the training period (cf. section 3.3), the Dutch situation implied that apprentices typically had a so-called training-labor agreement ('leerarbeidsovereenkomst'). This was not (nor is) one separately institutionalized type of contract but is a combination of a separate labor contract and a separate training contract. The training contract and its main conditions (but not the labor contract) were defined through the Apprenticeship Law (and, currently, through the WEB). It had to be signed not just by apprentice (or parent) and firm, but also by the relevant national and regional body. Labor contract terms were (and are) defined through collective bargaining. In the late sixties and seventies, training contracts for Dutch apprentices (for the duration of the training period) were routinely combined with labor contracts for an unlimited period. So at that time, Dutch apprentices tended to enjoy more formal[30] job and employment security than their German counterparts, whose employment with their training firm was and is only secured for the length of their training. There were some other interesting differences with the German apprenticeship law that implied less protection for Dutch apprentices. The Dutch law did not include a ban on apprentices performing unsuitable tasks; apprentices did not have a right to a continuation of their contract when failing

to pass their (first) final examination[31]; and the contract is terminated when the apprentice reaches the age of 27[32] (Van Lieshout & Van Liempt, 1999: 125).

Related instruction for apprenticeship was increasingly delivered by specific trade schools ('streekscholen'): their number grew from 11 in 1970 to 25 in 1978 (Bakker, 2001: 117). The work-based component was typically delivered by an individual firm, some of the larger ones having their own apprenticeship schools to organize their apprenticeship training, as is still the case with many larger German firms. The LOLs set skills standards, developed and organized national examinations (which included a practical as well as a theoretical component, which both have to be passed in order to graduate) and provided diplomas for the (work-based component of) apprenticeship programs. These LOLs were joint organizations of sector unions and employers' associations, now legally required to also include representatives of a related instruction school association and parents, and subsidized by the state for their public tasks in the regulation of apprenticeship. The Act intended a monopoly of one LOL per economic sector, but as several contemporary observers noted, the range of LOLs operating in subsequent years has shown examples of several operating in closely related fields (cf. Laman Trip, 1976: 23). The LOLs also employed trade consultants, who counseled both apprentices and their firm-appointed trainer. The latter was the primary task for the regional bodies. They counseled (prospective) apprentices, (training) firms and intermediary organizations. By 1967, there were 34 LOLs[33], 14 regional bodies, and 33,000 firms training apprentices (Geurts & Tesser, 1976: 42).

Contrary to German apprenticeship, the Dutch Act distinguished two different qualification levels within the apprenticeship system: primary apprenticeship and continued apprenticeship. Primary apprenticeship, intended for secondary school-leavers of whom an LBO or equivalent diploma could be demanded[34], took two or three years. Primary apprenticeship gave access to secondary apprenticeship, which in later years in turn might give access to tertiary apprenticeship, each of those offering one or two year tracks. Both often also allowed direct access from HAVO and VWO (and, for secondary apprenticeship, MAVO) graduates. Apprenticeship graduation, however, did not result in entry rights to school-based education such as MBO, HBO or university.

Apprenticeship numbers hovered around 70,000 between 1966 and 1972 (Ganga, 1992), 80% or more of them in primary apprenticeship. Over the years, the relative share of primary apprenticeship in total apprenticeship numbers declined from 86% in 1966 to 79% by 1980 and 65% by 1990 (Ganga, 1992). Returning to the seventies, apprenticeship numbers showed their dependence upon economic conditions by declining sharply in the wake of both oil crises: from 70,588 in 1973 to 54,642 in 1976 (Ganga, 1992). Then they rose to the old level and peaked at 74,341 in 1980, before beginning another sharp drop to 59,161 in 1983 (Ganga, 1992).

#### 5.5.1.2 MBO

MBO prepared its students for intermediate level employment in various occupations and sectors. Pathways were primarily targeted to the occupation, but also included general subjects such as languages. The 1968 'Mammoth' Act anchored and strengthened the position of MBO in the Dutch educational system. In its wake the number of MBO schools expanded rapidly and pathways were developed for new sectors such as the hotel and catering industry, tourism, nursing and civil services (BVE procescoördinatie, 1997). By the eighties, MBO consisted of a broad range of separate schools for various occupations and branches offering 3- and 4-year school-based pathways: economic and administrative occupations, shopkeeping, hotels and catering, technical occupations, services and health care, butchery, commerce, housekeeping and technical education, laboratory schools, nautical schools, and agricultural schools.

Until the early nineties MBO was governed by class schedules set by the education sector itself rather than skills standards set by social partners. For some tracks the Minister of Education set a required class schedule, for others schools could propose their own alternative schedule – but few did, as implementing the proposed table of the Department of Education and Science implied automatic approval. Some sectors also had national examinations, set by the same Department.

MBO often included a work-based component (internships or 'stages'). Size and organization of these internships varied by sector and branch: there could be one or more internship periods, and they could vary from a couple of weeks to several months. Within the framework of the class schedules, schools themselves were responsible for their organization. State regulation did require a written internship contract to be concluded between school, student and training firms, including the learning activities to be undertaken at the workplace, working hours, counseling by school and firm, and insurance. It prescribed themes to be regulated in such contracts, but lacked the link to a basic definition of rights and duties of the parties involved as the Apprenticeship Act included. Interns could receive some financial compensation from the internship firm, but many didn't (and today, still don't), making interns cheaper than apprentices.

Rising youth unemployment in the late seventies brought the government to address the so-called 'gap in the Mammoth Law': a growing number of youths left (lower) general secondary education without a sufficient qualification to find direct employment, and failed to secure an apprenticeship position as supply started to decline. The 'gap' meant that there was no suitable school-based alternative available to apprenticeship for this group. The answer were 21 experiments with full-time school-based short MBO courses ('Kort Middelbaar Beroepsonderwijs' or KMBO) in 1979, followed by a four year provisional legal arrangement, extended for a subsequent four year period (De Bruijn, 1997; Bakker, 2001: 133-148).

Surprisingly, LBO, apprenticeship and socio-cultural organizations and educational institutions were more prominently involved than MBO schools. Participation in short-MBO grew to 12,000 in 1983 and over 25,000 in the late eighties. Employers, however, considered short MBO a significantly less than equivalent alternative to apprenticeship training (VNO & NCW, 1980: 24-25).

### 5.5.2 A history of incremental policy reform

#### 5.5.2.1 The Wagner Committee and the Open Summit

We discussed the importance of the so-called Wagner Committee for Dutch economic and labor market reform in section 3.2.2. In its first report, the committee signaled increasing discrepancies between labor market supply and demand in terms of education, occupation and age. One of its recommendations is therefore to improve the linkages between education and labor market (Van Dellen, 1994: 18). It advises to improve the status of technical education; to give trade and industry more voice in the programming of in particular technical education (whereby the importance of apprenticeship and internship is stressed); to prepare workers for the need for further training during their career; and to expand opportunities for work-based learning in firms in the face of the exploding youth unemployment at the time.

Government decided to continue the committee, and its second and third reports elaborate upon the previous notions, resulting in more specific recommendations for VET reform. The second report discusses two important characteristics of Dutch VET: its sequential rather than dual institutionalization and the focus on school-based VET relative to Germany (cf. section 2.3.6.3) and the lack of involvement of social partners in defining the contents of school-based VET. It pleads for an increased involvement of social partners in VET, and for an increased role for a work-based component in it. Young people who do not enroll in university should finish their career in vocational (or professional) education. And, in accordance with the German example, apprenticeship should be the main school-to-work route.

The report observes the sharp decrease in apprenticeship positions in the economic recession of that time (the number of apprentices dropped from 74,341 in 1980 to 59,161 by 1983; Ganga, 1992), and calls for efforts to increase the number of positions over the next few years. It summons social partners to reach agreements to lessen the dependence of apprenticeship on the economic tide, as well as trying to ensure (together with the state) to increase the supply of apprenticeship in order to absorb all young school-leavers. It also pleads for a more flexible approach to the combination of labor and training contracts, and to related wages. The committee fears that the fact that training contracts are combined with permanent labor contracts, and the fact that apprenticeship wages lie more above state minimum wages than warranted by apprentices' productivity

in a number of sectors, are factors in the decrease of apprenticeship numbers. Finally, the committee recommends linking the development of apprenticeship to further training of older workers and unemployed, as well as the integration of short MBO and apprenticeship, in order to prevent the former from luring potential apprentices.

For MBO and HBO, the committee proposed the introduction of two stages: a first phase consisting of full-time school-based education and training, and a second phase under the primary responsibility of trade and industry which combines work-based VET with school-based related instruction. As in the apprenticeship system, combined employment/training contracts should be concluded to govern the former. In sum, the report proposes dualization of (the second phase of) MBO and HBO.

To increase the involvement of the social partners, the report recommends the creation of national bodies at the sector level for MBO and HBO, resembling those already in existence for apprenticeship. Their guidelines would have to include requirements for the inclusion of a work-based component in MBO and HBO. The new roles for social partners and firms in (work-based) VET should be regulated in a Vocational Education Act, as well as the joint responsibility of government, social partners and national bodies for the structure and contents of VET, work-based training sponsoring and the regulation of employment/training contracts. In addition, trade and industry should be involved in local and regional consultation committees, school boards, in technical teacher training, and by making employees available to counsel students in the work-based training component.

In the wake of these recommendations in the second Wagner report, an open summit was organized in the spring of 1983 to discuss them: the 'Open Wagner Consultations' (Open Overleg Wagner, 1984). Peak associations of employers and unions, educational peak associations, and (the most relevant Departments of) national government participated. The Open Summit shared the view of the Wagner Committee that social partners had become too detached from VET governance, and shaped its recommendations on the principle of a shared responsibility of education, government and social partners to improve the linkages between education and labor market. In general, the Wagner recommendations have been adopted for MBO, but not for HBO. The Open Summit recommended the creation of national bodies for MBO. The Open Summit also adopted the recommendation for a loosening of the tie between apprenticeship training contracts and permanent labor contracts, albeit with the implication that the combination of training contracts with permanent labor contracts was preferable. But combining training contracts with fixed-term labor contracts, or even fixed-term training contracts without labor contracts was deemed acceptable in order to achieve the desired increase in apprenticeship numbers. Which brings us to the most remarkable single recommendation of the Open Summit: it translated the proposed increase in apprenticeship positions into the formidable ambition to double the influx of new apprentices in primary-level apprenticeship

- at a time of severe economic crisis and high youth unemployment.

The Wagner dualization proposals were not confirmed by the Open Summit. It argues that both apprenticeship and school-based MBO with internships have their own merits and their own functions in the VET system, as some young people prefer more school-based VET, while others prefer more work-based learning. It instead recommended the continued co-existence of school-based tracks including internships and dual, apprenticeship-type tracks, albeit with improvements to the organization of the work-based component in both types of track. The Open Summit argues that school-based VET should include a practical component (internships, observations, excursions), and that internships in particular are a necessary ingredient to acquire a vocational qualification. It subsequently qualifies this position by noting that internships should be a responsible learning instrument in the wake of the education targets, and should only be implemented if other learning instruments are insufficient to attain these goals. Internship components should be emphatically considered in the process of skills standards development, and they should be governed by regulation including quality standards. Guarantees should be created to ensure that internship supply can meet demand. It stops short of calling for legal regulation in this respect, as relevant partners were willing to develop an adequate and effective internship policy.

#### 5.5.2.2 Changes over the eighties: apprenticeship

Various institutional changes occurred in Dutch VET governance in the wake of the Wagner Committee and the Open Summit. To pursue the goal of doubling the number of new apprentices stated by the Open Summit, social partners in many Dutch sectors agreed upon a deterioration of labor conditions for apprentices in the early eighties (Frietman, 1990). Employers had previously lamented the steep rise in apprenticeship wages over the seventies (in the wake of the introduction of youth minimum wages in 1974). Gross wages for 17-year old metalworking apprentices rose from Dfl 303 in 1972 to Dfl 1,004 by 1980; for adult apprentices, they rose from Dfl 723 to Dfl 1,827 over the same period (VNO & NCW, 1980: 45)[35]. The subsequent deterioration over the eighties had various shapes. To begin with, some sectors confined the duration of labor contracts they gave apprentices to the training period; others (such as metalworking) went one step further and no longer coupled the training contract to any labor contract at all. In addition, wages were limited[36]. In some sectors, wages were no longer paid for the time spent in related instruction (Overdiep, 1991). In metalworking, the abolition of related labor contracts for apprentices resulted in lower trainee allowances replacing the previous apprenticeship wages. In construction, where the combination of training and labor contract continued, apprentices were paid for only 20 hours during the first six months (Hövels et al., 1989; Frietman, 1990). Hence, in this respect an

increase in flexibility occurred in the Dutch apprenticeship regime.

But as with Dutch labor market reform in later days, the other side to this increased flexibility was intended to be enhanced security, particularly for unemployed young people, as the aforementioned measures were intended to make apprenticeship positions available to more youths. The state and the social partners undertook additional initiatives to achieve this goal. Social partners in many sectors have created extensive training funds through collective bargaining from the eighties onwards, many of which sponsor apprenticeship training. Sector training funds are financed through a levy on firms' wage bills, and redistribute the money to training firms to (partially) compensate them for the costs of apprenticeship training and/or further training (Waterreus, 1997; 2002). Waterreus (1997) identified 66 training funds (funds created by a levy system which subsidize training) in the Dutch market sector. 30 (out of 48) sponsored apprenticeship training, 41 sponsored further training, and 37 funded other activities. Almost half of these funds entitled workers to a specific number of days' of training. Usually, this is a collective entitlement at the firm level, and the employer decides which workers actually receive training. Waterreus (2002) identified 99 training funds. These now include the public sector; some additional funds were discovered; some had merged; but the growth also indicates the creation of new funds since 1995 (e.g. in the information and communication technology sector, for temporary employment agencies and the travel industry). Some sectors have separate funds to sponsor apprenticeship and further training; others have umbrella social funds that sponsor an even wider range of activities, including apprenticeship and/or further training. Most funds of the latter type are not created through a levy system, but through public and E.U. subsidies. 80% of the funds was created over the eighties and nineties. In all, 38% of firms covering 2.5 of 6.6 million workers were covered by a training fund in 1999, two-thirds of them being subsidized that year. Firm coverage varies by sector. Energy and water, as well as hotel and catering are sectors with 100% coverage; construction has 52% and industry 71%: financial services have no training funds at all. As of 1999, firm levies to such funds are eligible for an extra tax deduction as far as they concern course costs (not: wage subvention for time spent in training). Besides these 99 training funds, the later study identified 11 cross-sector and public funds that stimulate training more indirectly, for instance through co-funding of training projects. Waterreus (2002) observes a substantial growth of both worker training (in particular in small firms, though training investments there still lag behind those in larger firms) as well as activities of training funds and other training stimulation arrangements in collective bargaining agreements (cf. section 5.3.5). By 1999, further training was by far the largest expense category of the funds. There is a significant decrease of the share of apprenticeship expenses from 30% to 13%, but this is probably explained by an institutional change in government financial support for apprenticeship training. The state already subsidized the work-based

apprenticeship training component on a small scale in the seventies. In the wake of the Open Summit target to double primary apprenticeship intake a structural and substantial state subsidy called BVL ('Bijdrage Vakopleiding Leerlingwezen') was created. The subsidy was allocated to the sector training fund, and consisted of three components: a basic component, an additional component for GOAs (to be discussed below), and an additional component for specific target groups. In 1994, this subsidy was replaced by the aforementioned fiscal facility to training firms themselves.

In addition to the creation of training funds, many sectors (such as metalworking[37] and construction) organized local training partnerships ('gemeenschappelijke opleidingsactiviteiten' or GOAs) that formally employ the apprentice and place them with one (or more) member firms that perform (parts of) the actual work-based training component (Frietman, 1990). Most metalworking GOAs were generally a pool of apprenticeship positions supplied by individual firms (Hövels et al., 1989). Others had a more 'school'-based character implying off-the job training in a GOA facility combined with work-based placements with firms. Only through the 1988-1989 collective bargaining agreement did individual firms regain the option to train apprentices themselves. In the early nineties, 90% of metalworking apprentices were trained in GOAs (Aalders, 1994). In construction, a GOA rotated apprentices in different training firms due to the specialized nature of many (small) contractors who cannot deliver full training for all relevant skills - resembling the ÜBS in German construction apprenticeship (cf. section 3.5.3). Hövels & Verijdt (1987) list three ways in which GOAs can alleviate apprenticeship shortages. First, independent associations with a primary goal of training may find it easier to supply extra training positions than private-for-profit firms. Second, GOAs can combine partial training positions with firms that in themselves are insufficient to deliver full training and/or to commit to the full duration of apprenticeship training. Third, they can alleviate shortages by combining apprenticeship training with part-time jobs, as was done in installation technology, where two apprentices shared one job. Their most important concern is that rotating apprentices across more firms may weaken the bond between an apprentice and an individual firm, and makes it more doubtful for an individual firm whether the passing apprentice will end up with it rather than with one of the other training firms. As firms primarily train to have qualified workers in their future, this might gradually undercut their inclination to train. This flexibilization of apprenticeship training governance thus also caused more differentiation, both between sectors (such as metalworking and construction) as well as within them. In metalworking, for instance, three separate apprenticeship training situations arose for apprentices employed by these GOAs: training in a (former) firm school, in-company training corner, and, on the job training. Each of them paid different trainee wages, and qualified different state and training fund subsidies to the GOA (Hövels et al, 1990).

The result of all these policies and institutional changes was indeed that the ambitious goal of doubling the number of new apprentices in primary apprenticeship was met over the second half of the eighties. The number of new primary apprentices rose from 26,670 in 1983 to 52,494 by 1988 (and 53,158 by 1990; Arbeidsvoorziening, 1992: 31). Total apprenticeship numbers rose from 73,394 in 1983 to 127,388 by 1990 (Ganga, 1992). Obviously, the improving economy and employment situation also allowed for this success. But the success also occurred against the background of a declining size of relevant youth generations, and a declining outflow of secondary education. Growing numbers of apprentices from general secondary education and short MBO, and a rising percentage of LBO graduates becoming apprentices to counteract the overall decline in LBO participation, were responsible for this. Ganga (1992) concludes that apprenticeship apparently became more attractive to both young people and firms over this period. Not all apprentices, however, completed their training: 37% of new 1987 primary apprentices abandoned their training prematurely (Arbeidsvoorziening, 1991); by 1990, 23% had graduated, and another 38% had at least completed the final training year. This implies that Dutch graduation rates lie significantly below those in German apprenticeship.

#### 5.5.2.3 Changes over the eighties: school-based VET

Turning our attention from apprenticeship to school-based VET, the sector did suffer (together with the other educational sectors) from the financial problems of the Dutch state over the eighties. Each education sector faced budget cuts, which were to an important extent achieved through sector-specific reform efforts focusing on efficiency gains through concentration and mergers of schools and colleges. The three-letter acronym for this reform for the VET sector was SVM ('Sectorvorming and Vernieuwing MBO'; cf. OW, 1988; SVM procescoördinatie, 1990). To be precise, budget cuts did not result in an overall decrease of available means, but in a significant decrease in their previous growth pace. And, the operation strengthened policy lines developed in the wake of the Wagner Committee, and followed through in the 1996 WEB. SVM applied to MBO and full-time short MBO, and consisted of two phases: a first phase of sector formation and school mergers, and a second phase of skills standard development in cooperation with the social partners. The first phase entailed school mergers to form broad schools offering both MBO and full-time short MBO in four economic sectors: agriculture, the technical sector, economy and service, and health care. It integrated between 300 and 400 separate schools in 141 MBO schools by 1991, each of them offering VET for at least one of the four sectors. The second phase started with the formation of national bodies for MBO in 1989: sector partnerships ('Bedrijfstaksgewijs Overleg Onderwijs Bedrijfsleven' or BOOBs, and 'Bedrijfstaksgewijs Overleg Technisch Onderwijs' or BOTOs) were created to develop skills standards for the MBO programs. These were organized

per sector, and consisted of an equal number of representatives from education and the sector. The final approval of the standards remained the sole competence of the Minister of Education. These partnerships completed their first sets of standards in 1993, only to be merged with the aforementioned LOLs into 22 new sector standard-setting partnerships: the LOBs (now KBBs) discussed in section 5.3.3. This phase also entailed (peak) employers' associations and unions becoming involved in MBO policy consultations between the state and the schools.

Besides SVM, two separate but largely similar integration processes occurred (cf. Bakker, 2001: 140-141). One concerned apprenticeship, part-time short MBO and various training arrangement under the jurisdiction of the Department of Social Affairs and Employment. These were lumped together as 'cursorisch beroepsonderwijs' and regulated by a separate Act from 1992 until the 1996 WEB. Another one concerned the adult education sector, which was regulated by a separate Act from 1991 until the 1996 WEB. As to the former, the schools for related instruction were broadened to include the other types of training, but apprenticeship governance itself did not change significantly, as this process was rather one of ordering a differentiated supply than of integrating the arrangements themselves (Bakker, 2001: 140-41).

Nevertheless, some have complained that the budget cuts, reorganizations and lay-offs over this period were achieved at the expense of attention for innovation in contents and in contacts with social partners and trade and industry (cf. NCW, 1992). In the meantime, MBO participation increased sharply and undisturbed from 168,000 in 1980 to 288,000 by 1990 (SCP, 1992).

#### 5.5.2.4 The Rauwenhoff Committee

By the end of 1989, the Dutch government installed a new advisory committee chaired by an ex-CEO: the 'Tijdelijke Adviescommissie Onderwijs Arbeidsmarkt', also known (after its chair) as the Rauwenhoff Committee (Tijdelijke Adviescommissie Onderwijs Arbeidsmarkt, 1990). The committee proceeded along the lines drawn by the Wagner Committee[38], as well as those observed in the SVM and other contemporary policy processes. It shared the view that government, social partners, trade and industry, education and individuals are jointly responsible for initial VET and further training. Its analysis centers on the conviction that that joint responsibility can not yet fully blossom because the various actors are hampered in their room for maneuvering, and its recommendations are intended to improve linkages between education and labor by increasing actors' maneuvering scope.

This general undercurrent is reflected best in the first central theme of its recommendations: the concept of the *autonomous school*. Schools and colleges should receive more freedom and autonomy from the Department of Education, which includes the freedom to look for alternative funding sources (e.g. in training unemployed or incumbent workers).

The second central recommendation was to expand *co-makership* in VET between business and education. Contrary to the Wagner Committee, which had proposed a sector level intermediate level consultation structure (which was subsequently created for MBO), as far as the Rauwenhoff Committee was concerned, this structure could be abolished in favor of direct contacts between individual schools and firms. Such micro-level contacts were thought to improve linkages between education and labor by allowing more flexibility.

One obvious example was to stimulate work-based forms of VET, such as apprenticeship. Like the Wagner Committee, the Rauwenhoff Committee proposed that each type of vocational education (MBO, HBO and now also university education) should include a compulsory, fluent school-to-work transition based upon an employment/training contract between school, firm and individual. Under the slogan *dualization* ('dualisering'), this goal was listed as a separate goal next to co-makership. The combination of school-and work-based component could be shaped according to different models (e.g. the standard apprenticeship model, or alternating periods of more work-based and more school-based VET). School and individual should be responsible for the entire pathway, while firms should be responsible for the possible combination of training contracts with labor contracts. Social partners in sectors should stimulate the latter, but should no longer be directly involved with the concluding of an individual contract. Work-based students should be rewarded according to the legal youth-minimum wage for the number of hours spent in work-based training. Social partners and state should arrive at a covenant to shape this dualization.

The fourth and final proposed central theme was that of a *starting qualification*: each Dutch citizen should receive a lifelong right on publicly sponsored education to achieve a diploma at or beyond the level of primary apprenticeship (cf. section 5.4).

The government generally responded favorably to the report, but simultaneously allowed itself important deviations on both the central concept as well as on specific recommendations (OW, 1990). To begin with the former: the government proposed the concept of a shared responsibility of all partners for VET and further training, rather than a joint responsibility. It does take issue with the classic division of responsibility, where government is responsible for an adequate supply of initial VET up to labor market entry, and for second chance adult education; trade and industry and individuals for further training; and labor market authorities for retraining of the unemployed[39].

As to the specific recommendations, the government agreed with the ambition to arrive at a fluent, dual school-to-work transition in each pathway, but declined to act as a central director for dualization of school-based VET. The initiative should lie with individual schools and firms; the idea is one of a bottom-up process with the government monitoring decentralized efforts through quality norms. Work-based

VET should not necessarily always be paid, unless it includes productive labor. The government also assumed a general correlation between qualification level and extent of the school-based component to exist - which means that dualization options are considered most valid for MBO, less for HBO, and sparingly for universities. It proposes a swift start of dualization in short MBO. MBO should start with 'free-haven' projects where possibly inhibiting central regulations are lifted to allow initiatives from sectors to prove themselves; but full-time MBO pathways should continue as they were, at least for the time being. HBO colleges were allowed to offer cooperative education pathways, where study and work periods alternate. Universities are just invited to develop dual experiments.

Co-makership between individual schools and firms is considered worthwhile, but not at the expense of the intermediate skills standard setting bodies. The government expands the definition of co-makership from the one-on-one relations between schools and firms in the Rauwenhoff interpretation to an interpretation which includes relations among schools, among firms, between schools and private-for-profit institutes, and between schools and sector training institutes. The government also subscribes to the goals of autonomous schools and a starting qualification, but (as with co-makership) is less ambitious in its specific elaboration of these goals than the Rauwenhoff Committee. The government proposes a lower target than the Rauwenhoff starting qualification: a transitory qualification at LBO/ MAVO level. And the idea of a lifelong right to state sponsored education to acquire a starting qualification is reduced to a right up to age 27.

#### 5.5.2.5 Two covenants

In the wake of the Rauwenhoff report and the government response to it, two covenants were agreed upon: one between the state and social partners (OW, 1991a) and another one between the state and the VET schools (OW, 1991b)[40]. Covenants were along the general lines of the government reaction to the Rauwenhoff report, albeit with some differences.

The covenant between state and social partners agreed to keep apprenticeship numbers constant, and to try to support its growth trend. The covenant acknowledged that dualization may have its advantages, but simultaneously points out that it cannot solve all problems between education and labor market (OW, 1991a). It also argues that the scope for dualization for specific education and economic sectors cannot be established at a central level, in advance, and calls for research[41] to establish discrepancies between education and labor and the attraction of and possibilities for dualization. Social partners in economic sectors should decide on that matter. And it admonishes sector employers' associations and unions to reach agreements on number and quality of work-based training places in collective bargaining agreements. The covenant stimulates co-makership, a theme that is

now again focussed on relations between schools and firms, but expanded to include relations between groups of schools and an economic sector. The covenant opts for a starting qualification policy as the Rauwenhoff Committee did (and unlike the government which opted for a lower target of a transitory qualification). But unlike that committee, it formulates a policy intention (to try to stimulate as many youths and workers as possible to achieve a starting qualification) rather than a right.

Both covenants do not completely overlap: there are differences between them. An interesting one is that the entire covenant between state and VET schools does not contain the word dualization. Instead, the chosen phrase is 'strengthening the work-based component', which of course can also be accomplished by improving/ expanding internships. The covenant lists the following principles (OW, 1991b) for a strengthening of the work-based VET component:

- all upper secondary VET tracks are governed by skills standards set by the Minister of Education;
- 'long' MBO remains governed by skills standards linked to vocational qualification, general qualification, and a transitory qualification to gain access to HBO;
- strengthening the work-based component of short MBO must not alter its threshold-free access;
- if strengthening the work-based component results in financial gains the fruits will fall to schools and LOBs.

The latter point is noteworthy as it is indicative of a fear present at that time among VET schools and social partners: that the state in general, and the then Minister of Education in particular, was considering dualization in part as a means to cut back state investments in (upper secondary) VET. The traumatic efficiency operations of the eighties help explain this fear, though both state and Minister have always denied its validity. This fear does help explain the reluctance among these actors in fully embracing the dualization theme in those days (Van Lieshout, 1992; Dercksen & Van Lieshout, 1993). Presumably in order to reduce this fear, the government included a budget guarantee for VET in both covenants, trying to guarantee peace in the sector and allowing it to focus on innovation in contents.

In the state-school covenant, schools further acknowledge that apprenticeship is a good alternative to full time short MBO, and promise to cooperate in limiting the intake of students in the latter. At the very least, apprenticeship influx should remain constant. The covenant also specifies the increased autonomy of schools, which will be funded on a lump sum basis, and can make their own strategic choices regarding personnel, buildings, inventory and innovation.

#### 5.5.2.6 The preparation of the WEB

In the wake of SVM, the related institutional changes and developments in VET over the eighties, and the Rauwenhoff policy trajectory, the main characteristics for the new integrated vocational and adult education system, subsequently to be institutionalized by the WEB, emerged.

The process of ROC formation actually started in 1991 with a government policy document (OW, 1991c). It entailed a next (enforced) step in mergers as it formulated the target of one ROC in each labor market region, including all (schools for) related instruction, short MBO, MBO and adult education. Arguments for ROC formation were to increase the scope for tailor-made solutions for individual students, and to ease transition between various tracks and pathways, both to reduce drop-out and to facilitate lifelong learning/recurrent education. Paradoxically, the merger process was to be one of voluntary mergers between the schools, stimulated by financial incentives in state funding. A specific requirement was to arrive at schools covering three of the recently formed SVM sectors[42]. Of all main components of institutional innovation resulting in the WEB, ROC formation was the most heavily contested. Another increase in the scale and scope of VET schools might have more disadvantages than advantages, and the sector might be better served by peace on this front to allow it to focus on innovation in VET contents (cf. NCW, 1992). The schools in the sector accepted the ROC perspective, but criticized the involuntary and institutional character of the related policy (Veld, 1994: 147).

The integration of the skills standards systems for MBO and apprenticeship into one encompassing national qualification structure was spearheaded by another government policy document (OW, 1992a) and a resulting covenant between the state and LOLs (OW, 1992b). LOLs and BOOBs/BOTOs were merged into LOBs (now KBBs) to develop an integrated national qualification structure up to and including the upper secondary level. For each sector, all relevant vocational qualifications were to be defined in terms of certificates (themselves consisting of various partial certificates) and skills standards. Schools would have a large amount of autonomy as to how to achieve these qualifications for their students. The LOBS were to be tripartite bodies with representatives of firms, unions and schools. Besides the development and innovation of sector qualification structures, LOBs would have responsibilities in concluding training contracts, training firm accreditation, counseling work-based students/apprentices, and the development and implementation of an examination and graduation system.

In this period, the dualization theme was addressed by another government advisory committee, the dualization committee or (again after its former-CEO chairman) the Van Veen Committee (Commissie dualisering, 1993). The committee basically follows up on both the government response to Rauwenhoff and the covenants by watering down the Rauwenhoff (and, prior, Wagner) proposal on this

theme, by stating that there is not one general discrepancy between education and labor, so there could be no universal solution – including dualization. It proposes to replace the concept of dualization by that of vocational socialization ('beroepsvorming') which can be shaped in different ways (as implied by the report's title, which translates as 'vocational socialization in many ways'), including (improved) internships. It thus cemented the tiles on the already emerging foundation for the continued coexistence of primarily work-based and primarily school-based pathways under the WEB[43].

As of 1994, the BVL state subsidy for apprenticeship training was replaced by a tax cut on training firms' wage bill taxes and associated social insurance premiums, of about € 2,000 per year per apprentice for training firms. As the tax cut benefits individual firms and there was no longer a specific subsidy for GOAs, their financing had to be reconstructed. In sectors with an evolved training infrastructure such as construction and metalworking, the typical solution was that GOAs themselves were accredited as recognized training firms, and as such became the beneficiaries of the tax cut themselves (typically on top of subsidies from the sector O&O fund). But in a newly emerging sector like information and communication technology, lacking an evolved associational and VET infrastructure, where GOAs had been just proved vital to the development of such an infrastructure in the first place, some GOAs completely vanished, were taken over by ROCs, or redirected their activities towards a different (further) training market (cf. Van Lieshout & Van Liempt, 2001: 94).

In 1993, an umbrella government policy document described the main characteristics of the WEB (OW, 1993a), while a related policy document elaborated on the topic of adult education in general, and the starting qualification theme in particular (OW, 1993b). In the latter, the government admonished relevant actors to agree on obligations to stimulate the acquisition of starting qualifications. The former formulated goals and policy processes to arrive at a WEB active as of January 1st, 1996 (which was the date of expiry consciously set for separate temporary Acts governing the separate subsystems at the time). Goals were (OW, 1993a):

- one coherent system of flexible, effective and efficient pathways;
- each student gets offered a pathway that leads as fast as possible to the aspired goal;
- drop-out will be prevented as much as possible;
- employers' associations and unions have influence on the type and level of vocational qualifications;
- qualifications should be broad and oriented towards society.

The WEB is explicitly shaped as a developmental Act, combining current policy processes and new policy developments. This developmental nature continued in its final shape and implementation: some specific policies or parts of the institutional

context it created were only finalized after its introduction. An example is the process of ROC formation, which resulted in 46 ROCs by January 1st, 1997 (BVE procescoördinatie, 1997). By then, over a decade of mergers had reduced the number of schools in the sector from roughly 1,000 to 65[44].

Although the remaining policies, advisory reports and other policy events accompanying the creation of the WEB and continuing after its arrival hosted various interesting discussions, we will not further detail them here. The main characteristics of the contemporary Dutch VET regime from our international comparative perspective in this book has been defined by the policy process over the decade discussed above, and the main characteristics of the WEB have been outlined in section 5.3.3. We will skip to the first evaluation of the WEB, before drawing conclusions on trends, continuity, and change, and noteworthy characteristics of Dutch VET and its governance over the last two decades from an international comparative perspective.

### 5.5.3 The evaluation of the WEB

#### 5.5.3.1 The steering committee report

The WEB was evaluated in 2001 by a relatively autonomous steering committee. Its chair and members were appointed on a personal basis, therefore not representing organized interests. A policy memorandum from the Department of Education, Science and Culture to Parliament, however, explicitly interprets the evaluation assignment to be a report on the factual situation in the VET system, not an assignment to reconsider it (Polder, 2002). But the committee subsequently did get room to do suggestions concerning the WEB.

The committee distinguished seven thematic complexes based on the goals the WEB was meant to achieve. It organized a hearing with relevant interest associations to establish a central evaluation question as well as other questions for each theme, and subsequently commissioned a separate research project for each of them - except for the first theme that was explored by two separate projects (Polder, 2002). Themes and main findings for VET (we will continue to neglect adult education here) are listed below.

*Meeting societal demand, the linkage between education and labor*

The central question here is whether the WEB steers actors to allow the system to function adequately, geared to meeting social and labor market demand. Brandsma (2001) signals important friction areas regarding the qualification structures, and observes that particularly in this area, the results from negotiation and consultation processes do not yet result in an adequate meeting of social and labor market

demand. Heijke (2001) specifically targets the fact that current steering mechanisms insufficiently steer ROC tracks that deliver broad and sustainable qualifications for the labor market and offer optimum development opportunities for students. VET supply is too easily differentiated in separate tracks with insufficient attention to what should be included in initial VET on the one hand, and what should be included in further training on the other. Moreover, the macro level monitoring of effectiveness and efficiency is unilaterally geared to labor market demand, but it is not focused on students' interests and capacities.

*Meeting individual demand, accessibility, and the position of the student*

The central question here is whether the WEB steers actors to allow the system to function adequately, aimed at meeting individual demand, VET accessibility, and strengthening the position of the participant. Doets & Westerhuis (2001) observe improvements in these areas, but simultaneously observe a gap between possibilities offered by the WEB and the extent to which this room for maneuvering is used. They consider improvement of the selfsteering capacity of actors more important than legal changes to address this gap.

*Quality of the VET and adult education supply and examinations*

The central question here is whether the WEB steers ROCs and examination institutions to offer a supply of VET and exams of sufficient quality, targeted to external needs. The answer is positive, but has its caveats (Nieuwenhuis, 2001). It is positive because quality awareness has increased, and is beginning to translate into operational quality policies. One caveat is that quality policies have not yet been implemented integrally or from a shared educational vision. Another is that the system of regulation and responsibilities has not yet been elaborated in a transparent fashion. In general, the WEB functions adequately, but in some aspects (the regulation of examinations in particular) it can still be optimized.

*Efficiency of pathways: internal and external returns*

The central question here is whether the WEB offers sufficient conditions to realize optimum accessibility, graduation rates, and outflow to HBO or labor market (Van der Velden, 2001). Various reasons have prevented a full quantitative evaluation. One was the simple fact that for many sectors the first exit of a generation of graduates had yet to occur, preventing an assessment of external returns to the new VET tracks. In addition, reliable national and local figures on graduation and drop-out rates are also lacking. With these important caveats in mind, the following findings are reported (Van der Velden, 2001; Geerligs et al., 2002). VET accessibility

has increased between 1992/1993 and 1998/1999. VET participation has grown as a share of the relevant age group; accessibility for target groups has increased; there is a slight decrease[45] in the number of youths leaving education without a starting qualification; and improvements in the linkages between MAVO/VBO and VET have not resulted in higher drop out rates in the first year of VET[46]. Preliminary developments in post-WEB graduation rates indicate either a slight improvement or at the least no deterioration - which also means they are still quite low. The number of VET graduates continuing in HBO has increased from 25% in 1991 to 39% by 1998. First post-WEB labor market results have generally been good, but the booming Dutch labor market situation at that time is the most important cause for that (cf. section 5.4).

*Linkages with other education subsystems* (De Bruijn, 2001)

The central question here is whether the WEB offers sufficient conditions to allow an optimal gearing of VMBO to VET, and VET with HBO, respectively. De Bruijn (2001) observes that the WEB only sets a general framework for these linkages. Curriculum linking must occur in regions, between or within individual schools/colleges. In general, respondents do not consider WEB changes in this area necessary, although some specific suggestions for additional regulation are given.

*Self-steering system, autonomy of schools, quality assurance*

The central question here is whether the WEB offers sufficient conditions for self-steering by ROCs, policy capacity and quality assurance, geared to external needs (Karstanje, 2001). The conclusion is that the WEB does offer such conditions, but that they are not sufficient. The report notes that improvement processes in some areas have already started (e.g. a process by Colo (the association of LOBs) to strengthen the qualification structure, a joint process of the Colo and 'Bve raad' (the association of ROCs) to improve examination procedures, and improvement in the supervision of organizations).

*Different governance relations, decreasing governance workload*

The central question here is whether the WEB offers sufficient conditions for optimal governance relations within the VET system and a decreased governmental workload. The answer is yes and no, respectively (Leenknegt, 2001). Yes, because the WEB in principle offers enough room for a task division between relevant actors, allowing each to carry its relevant responsibility for the field. But the current division of tasks does seem insufficiently transparent in some areas, resulting in tensions among actors. And no, because the decentralized governance regime puts much

responsibility with in particular the ROCs, which leads to an increased governmental workload rather than a decreased one.

These reports and another hearing with relevant interest organizations on the research results were the basis for the evaluation report of the steering committee (Stuurgroep Evaluatie WEB, 2001; Polder, 2002). The steering committee concluded that actors were happy with the increased freedom the WEB offers them. It simultaneously concludes that the scope offered is not (yet) always used in an optimum fashion; that tasks and responsibilities are not always clear; and that various actors have swiftly taken up roles that effectively limit the scope for ROCs by additional regulation. Checks are unilaterally concentrated on ROCs, but few exist for other actors. ROCs are thus accountable for their performances, but are codependent for those performances on the performance of other actors. In sum, an imbalance has emerged in the division of responsibilities between various actors, and will have to be addressed. The report also observes a tension between the three goals of the WEB: to qualify for vocational employment, for HBO entry, and for social citizenship. In particular the committee finds that VET is targeted too strongly on labor market demands.

The steering committee identifies eight core problem areas:

1. the national qualification structure for VET;
2. the governance of the work-based component;
3. external accountability of examinations and examination quality;
4. accessibility and tailor-made solutions;
5. the position of participants;
6. internal and external supervision;
7. governance of adult education;
8. implementation of temporary regulation.

I will limit my discussion here to those of the aforementioned themes most relevant for the themes central to the international comparison in this book: the national qualification structure for VET and the governance of the work-based component.

Regarding the qualification structure for VET, the main problem is that the current governance regime results in a larger internal differentiation of that structure (in separate tracks) than is warranted. This results in tracks that do not qualify as broadly and as sustainably as is considered desirable from a macro level efficiency perspective. In the WEB, macro-level efficiency is supposed to be guaranteed through the work of an independent committee (ACOA) that advises on proposed qualifications from that particular point of view. Criteria to be considered were the supply of work-based training positions and labor market perspectives for graduates. As the (requests for) supply of qualifications, and the right to offer the corresponding tracks by individual schools exploded in the wake of the WEB,

the Department of Education has issued further guidelines to make this macro-level efficiency test more rigorous, specifying the sources schools should use to support their request. But ACOA found that these sources do not allow solid conclusions on labor market perspectives: they are often not comparable, and may even contradict each other. ACOA recommendations have therefore grown to test the quality of the argumentation of the request more than actual labor market perspectives themselves, and the Department of Education has formalized this practice in a new regulation requiring schools 'just' to show that they have analyzed the labor market situation. This in effect abolished the macro efficiency test, and the ACOA has not been asked for advice since 2000 (cf. SER, 2002: 16)[47]. The steering committee reports additional shortcomings to the qualification structure regarding internationalization, responsiveness, transparency, level 1 qualifications, qualifications for HBO entry and cross-sector qualifications. The proposed solution is to achieve the necessary cohesion of the qualification structure by limiting the number of (at the time) 21 LOBs to 4: one for each broad economic sector. Each of them should have a tripartite board. Underneath the umbrella of each of these 4 remaining LOBs, more branch-specific consultations could continue.

Regarding the work-based component, the three-party configuration between LOBs, ROCs and training firms is not without its problems, and the quality of the component is not always sufficiently guaranteed. Here, it is important to note that the WEB entailed a change in that division of responsibilities regarding student counseling during work-based learning. Previously, LOBs counseled apprentices, while MBO schools themselves counseled interns. One particularly debated theme during the development of the WEB was who would counsel students during work-based learning, since LOBs and schools both wanted this task. In the end, the WEB made schools responsible for the counseling of students during the work-based component. While they had already done so for their previous interns, this task was new for dual tracks, the number of which was increasing; and they were supposed to perform this task from their regular funds. Soon after the WEB, ROCs found this task to be more complex and time-consuming than they had foreseen; and their personnel was not always as specifically equipped for this particular task (dealing with firms) as the apprenticeship counselors of the LOBs had been. Interestingly enough, a significant number of ROCs found themselves signing contracts with a particular commercial initiative of a number of cooperating temporary employment agencies: 'PasKlaar'. 'PasKlaar' at least brokered between BOL and/or BBL students looking for work-based placements and firms. It sometimes acted as their formal employer and training firm while subsequently placing them with one or subsequent customer firms (making them a functional equivalent for GOAs for sectors that didn't have these, or across sectors)[48]. Either way, through this initiative or on their own, ROCs have improved their organization and counseling for the work-based component, although quality issues do remain. The steering group advises

ROCs to develop a powerful strategic policy to address that quality, for instance by exempting specialized personnel for this task. It also advises requiring firm trainers to be certified - albeit with the possibility of an exception for small and medium-sized firms, who this might pose too heavy a burden for.

#### 5.5.3.2 The Education Council report

The government (in particular the Education Minister) responded with a memorandum outlining some main lines to solicit another round of responses from relevant associations of VET actors, and simultaneously solicited advice from the Education Council. In general, the latter agrees with the steering committee that the WEB generally functions adequately (Onderwijsraad, 2001b). It also agrees with the committee that the coordination of the VET system should be improved, but whereas the committee has sought such improvements more in structural interventions, the Council opts for curriculum improvements within the current legal governance regime. It also emphasizes that the new legal governance regime should be given time to develop, and that in particular individual actors should be given time to increase their policy capacity. The Council judges it too early for revision/remodeling of the WEB. It does identify a number of themes that require further study:

- the development of a new-style, competency-based qualification structure;
- examination (a theme which is the subject of a separate report covering all segments of the education system);
- governance of adult education;
- legal changes that may become necessary further down the road.

But again, the Council emphasizes that the WEB itself is not the cause of most problems concerning the aforementioned themes; instead, more state governance in some areas (while preserving ROC autonomy) may be required.

#### 5.5.3.3 The Education Inspection report

Meanwhile, Education Inspection has published its own evaluation of the WEB (Inspectie van het Onderwijs, 2001). This report also emphasizes that WEB evaluation at this point in time can just offer a preliminary balance, as some policy threads were only implemented years after 1996, and some of those implementations would only be rounded off in future years. It also agrees with the other reports that in areas where the WEB does not yet function according to the original intentions of legislature, the cause is usually a not yet adequate implementation rather than inhibiting legal stipulations. Delegated tasks are not always adequately exercised

by actors yet, and occasionally they are even neglected. And, finally, it also concurs with (in particular) the Education Council that the further implementation of the WEB should use structural legal changes as sparingly as possible, as they distract from implementation itself. This report is organized around the themes: increasing scale, qualification structure, examination, work-based components, accessibility/ flexibility/tailor-made solutions, the position of participants, and self-steering capacity. Again, I will limit myself to the findings regarding the qualification structure and the work-based component.

With respect to the qualification structure, the report observes that the WEB has resulted in a more transparent structure of qualifications and tracks, and as such results in better linkages between the education and labor market. However, the number of tracks and qualifications is too high, resulting in a dispersed qualification structure. Replacing occupational profiles by occupational competency profiles, a better coordination among LOBs regarding VET supply, a better gearing of that supply to regional demand, and a simplification of the qualification structure by reducing the number of qualifications and tracks, are required. The WEB offers room for such developments, and relevant actors have already put forward initiatives along these lines. Regarding the work-based component, again the WEB is considered to allow sufficient opportunities. Although this component is often organized effectively, improvements are necessary regarding the evaluation of learning results in this component, linkages between theory and practice, counseling of apprentices/interns by ROCs and complying with legal stipulations regarding the training contract. And the division of responsibilities between training firms, LOBs and ROCs is evaluated as non-transparent. However, the WEB is again judged to offer sufficient scope to make it transparent. The only area where the WEB lacks stipulations is in terms of the accreditation of training firms (and the accountability of this process).

#### 5.5.3.4 The government response

In the light of all these extensive reports and comments, the final government response (and the preceding memorandum discussed with relevant organizations) to the report of the steering committee was succinct. Its main tune is that in some respects the time proved too early for a thorough evaluation of the effects of the WEB, while in other respects it proved to be too late because some areas (e.g. examinations) required urgent accompanying policies to address specific issues. The general conclusions are:

- the WEB allows sufficient scope to realize its underlying intentions;
- not all room to maneuver is used by relevant actors;
- there are no grounds for fundamental, structural changes;
- efforts are required to achieve quality and efficiency improvements within the current legal governance regime;

- future legal changes are relegated to a future mid-term orientation on VET policy and the future implementation of a recent long term orientation on 'Learning without limits'.

As to recommendations regarding the various specific themes, we will again limit ourselves to the qualification structure and the work-based component.

The government response agrees with the steering committee that the coherence of the qualification structure should be improved through a joint format filled with sustainable competencies, and subsequently relegates improvements of the qualification structure to policy efforts with the aim that had already been initiated in the field. ACOA had already advised a greater focus on core competencies in skills standards in 1999 (ACOA, 1999). This recommendation distinguished itself from the concept of key qualifications (cf. section 3.5.2.1). Core competencies are those capabilities of an individual that are used to tackle the core tasks of an occupation in adequate, process- and product-oriented fashion. The suggestion was adopted by the Department of Education and served as a basis for a Qualification Structure Development Plan developed by the association of Dutch KBBs, COLO (COLO, 1999). This then hosted a policy development trajectory resulting in a proposal for frameworks and formats for the desired qualification structure shortly after the WEB evaluation (COLO, 2002). One important relating new concept underlying the vision of a future improved qualification structure is a 'chain' approach: making the qualification structure competency-based requires a simultaneous shift to a competency-based approach in the tracks, in the work-based components and in examinations. Other relevant points made by the government in its response to the steering committee report are that the new qualifications should be broad and sustainable, and that the sponsoring formula for LOBs should no longer contain an element based upon the number of qualifications developed. As to the number of LOBs: the government sticks with a bottom-up approach, taking into account ongoing processes to stimulate mutual cooperation. Further ways to improve this cooperation will be discussed with the field. A separate point relating to the qualification structure in the government response is how to achieve a VET supply which is both effective and efficient. The theme has been relegated to the SER for advice.

Regarding the governance of the work-based component, the government sees the various specific problems observed by the reports as implementation problems, and does not propose any legal changes as to the division of responsibilities. However, should the associations of LOBs and ROCs agree upon necessary changes in the future, the subject would be open to revision. The government also declines to formalize certification of firms' trainers, primarily for fear that the resulting costs might deter some small and medium-sized firms from training. It does propose a study to identify ways for LOBs to increase transparency of how they deal with

evaluating the quality of the work-based component in general and that of firm trainers in particular.

#### 5.5.3.5 SER recommendations

In the wake of this response, the SER was asked for advice on three themes: (the governance of) macro-efficiency of VET supply, the work-based component and the occupational column (improving linkages between VMBO, VET, and HBO). Regarding the former, the SER (2002) subsequently advised the Minister to again abide by his own law and re-establish the macro-level efficiency test, albeit shaped following a somewhat different procedure than is currently included in the law. Further improvements are sought in implementing conditions for micro-level decision-making at the regional level. Schools should be required to consult with other schools, economic sectors, firms and KBBs on their supply and its change over time. And state sponsoring should be conditional for six years, and achieve 'regular' status only when the underlying business targets have been sufficiently met after six years. Regarding the work-based component, recommendations have little specific substance. Advice is phrased in general terms: to shape future work-based learning policies in a way that accommodates other relevant and/or desirable trends (e.g. lifelong learning, competency-based learning, changes in work organization), and to address current problem areas rapidly.

### 5.5.4 Conclusions: continuity and change in the Dutch VET governance regime

#### 5.5.4.1 Dutch continuity and change relative to Germany

This section has portrayed the evolution of Dutch VET governance over the past two decades. While it has been both the subject and product of a continuous reform process, from our international comparison with Germany and the U.S. its continuity in many respects is the first thing to be emphasized. The Dutch governance regime has always been much closer to the German VET regime than to its American counterpart. The typical route from education to intermediate level employment leads through multi-year vocational education and training pathways, whereas such long, structured and specialized pathways are the exception in the U.S.. As in Germany, VET is supplied by both schools and firms. As in Germany, national standards (albeit in different forms) have always governed the main components of such tracks, and there have been national examinations or (currently) indirect institutionalized checks to guarantee their quality, and ensure congruence with the national standards.

Change over those two decades has made the Dutch governance regime even more

comparable to its German counterpart: the emphasis on the work-based component has increased, and it is now a legally required part of each upper-secondary VET pathway. And, while traditionally occupational profiles and skills standards for the apprenticeship system were developed by employers associations and unions, but not for MBO, these associations (together with school representatives) now do so for all upper-secondary VET.

Having established these broad and increased similarities between the Dutch and the German VET governance regime, however, we must stress some crucial differences between the two. The most obvious one is that in Germany, apprenticeship routes, whose major component is work-based, dominate the school-to-work transition, whereas in the Netherlands, two types of pathway have co-existed: those with a major work-based component (previously apprenticeship, now BBL), and those with a minor work-based component (previously MBO, now BOL). In this German-Dutch comparison, the Dutch glass is both half full and half empty. One can just as easily argue that the challenging proposals of various advice committees to dualize (at least upper-secondary) vocational education have been fully implemented (with each track now having a work-based component) as that they have been futile (with primarily school-based tracks still dominant). Arguing either case is, however, irrelevant as compared with the more obvious observation that precisely these predominantly school-based pathways and their success in the Netherlands provide a third alternative to institutionalized German-style apprenticeship and American-style low VET institutionalization: substantial, state-funded, school-based tracks. For countries currently lacking the institutional prerequisites for a successful apprenticeship system (such as the U.S.), this Dutch example might prove a more viable example to learn from than the German apprenticeship example that has dominated international literature up till now. And, as the evolution of the Dutch VET governance regime over time shows, one can still have social partners set skills standards for (primarily) school-based tracks, and gradually expand and improve their work-based component as time goes by.

In earlier publications (cf. van Lieshout, 1997d), we have emphasized another German-Dutch difference in the institutionalization of work- and school-based components: in the German governance regime, school-based VET tracks explicitly function to ease the transition between general secondary education and apprenticeship, implying a *sequential* institutionalization of both types of pathways. The Dutch WEB provides the basis for a *parallel* institutionalization of both types of pathway, each by themselves facilitating the general secondary education to work transition. For roughly half of the qualifications, both options are currently open to young people and firms. It is noteworthy that the equivalency in terms of skills standards does not translate into a *full* equivalency in terms of graduates' early labor market careers. Both the history of the creation of short MBO since 1979 and the experience under the new WEB regime show a different appreciation by employers of

both pathways (with usually a preference for the more work-experienced graduates if available). And they show distinctions in labor market results of the graduates from both pathways (with more work-based tracks showing an easier school-to-work transition, but more school-based tracks apparently easing the chances of subsequent upward mobility). From a scientific point of view, it would be very interesting to make targeted comparisons of employer preferences for and early labor market careers of graduates from both pathways for specific labor market segments, and we hope the next WEB evaluation will seize this opportunity.

Parallel institutionalization of pathways might offer the advantage that, when apprenticeship supply declines in a declining economy, the more school-based pathways can absorb those youths unable to find an apprenticeship position. However, the German full-time vocational schools in fact do the same, to the extent that BFS experience delivers full credit towards subsequent apprenticeship training; indeed to the extent that it does not offer *full* credit, it in fact causes some delay in the individual school-to-work transition there. However: a declining economy will also cause a decline in internship provision in the Netherlands, a problem that will have to be solved by either relaxing quality standards for training firms[49] or offering school-based practical training alternatives.

Another consequence of the parallel institutionalization is that more school-based and more work-based tracks will compete for students and training firms. As the same schools provide both tracks, this competition should be fair enough, allowing both types of actors to follow their own preferences. In contrast to Germany, this does give Dutch firms the alternative of scaling back their training expenses by switching to hiring interns rather than apprentices - an option that could theoretically undermine apprenticeship supply over time. Recent enrollment numbers do not show such an effect as BBL participation has increased more rapidly than BOL participation (section 5.4), but, since this occurred in a booming labor market context, it will be interesting to watch enrollment developments in a floundering Dutch economy.

#### 5.5.4.2 Neglected questions

The new Dutch WEB governance regime is a remarkably coherent and modern legal regime, reflecting and improving upon the strengths of its ancestors, and integrating apprenticeship into the regular education system, which might help to improve its status. The WEB evaluation generally leads to a positive conclusion on the new governance regime: actors in the field, researchers and committees are generally happy with its basics, and criticism focuses on either particular legislative details or even more so, on implementation issues. Given the extensive nature of the evaluation, however, it is worth noting that it is limited in focus: it is focusing on this new Dutch regime, and its underlying philosophy, and whether the original

intentions have materialized. From our comparative perspective, there are some issues that have received surprisingly little attention. We have already mentioned one above: a more detailed look at micro-level decision processes (by firms, youths and schools) regarding the pathway choice within a particular labor market segment would be very interesting.

Another thing that is highly remarkable is the fact that, when attention in Dutch policy in general and this evaluation in particular focuses on the micro-level, it nearly always exclusively focuses on schools (and then mostly ROCs) and their autonomy. While the emancipation of work-based learning in the Netherlands has proceeded well in terms of a respectable position for dual tracks in legislation, qualification structure, and participation, this has by no means led to an emancipation of the training firm as an equally relevant micro-level actor as ROCs. The latter continue to figure much more prominently in the attention of Dutch policymakers than training firms. The German-Dutch contrast in this respect could not be sharper: in Germany the majority of policies and research is focused on the firm as the central training organization ('Ausbildungsträger'), while in the Netherlands it is the ROC which find itself in that spotlight. This in itself shows how strongly historically embedded cultural perceptions of VET continue even in and after legislative changes, which clearly aimed to enhance the role of the traditional minority partner. One would hope that a future evaluation of the WEB will focus more on the role of training firms and their perceptions and problems; failing to give them the attention they deserve runs the risk that particular problems (or perceptions thereof) may not appear on the policy agenda.

The same holds true for the lack of a volume focusing on differences between economic sectors in VET organization, school-to-work transition, and labor market discrepancies. It fails to uncover interesting similarities and differences on how a comprehensive legal regime can function differently depending upon additional governance mechanisms at the sector level (e.g. in terms of qualification structure, types of pathway, training funds), while such information could easily provide valuable policy lessons.

Another blind spot concerns the recurrent complaint about a too fragmented qualification structure in Dutch VET policy over the past decade. As 700 separate qualifications at the upper secondary level is indeed a remarkably high number in an international comparative respect, and there are indications of significant overlap between various of them, the goal of a little less fragmentation in the Dutch qualification structure is understandable. However, what is incomprehensible is that LOBs (and, indirectly, the social partners) should routinely serve as the scapegoat for this fragmentation. A perceived need for reducing the number of LOBs to combat this problem has been argued both in policy discussions preceding the WEB, and in those surrounding its recent evaluation. There would be some grounds for this if the cause for the high differentiation of the Dutch qualification

structure would lie in an extraordinary amount of *horizontal* differentiation in occupations. However: if one compares the total of approximately 300 German apprenticeship qualifications with the total of over 600 Dutch qualifications, it is obvious that the higher Dutch number is caused by a more *vertical* differentiation of the qualification structure, rather than an exaggerated horizontal differentiation. The German apprenticeship qualification structure has mostly just one qualification level (and a maximum of two in some sectors), implying that most of those 300 qualifications are distinguished horizontally. The Dutch WEB distinguishes four qualification levels, its intention being that each branch/occupational group has a pathway at each level. In practice, this is not always the case, as some areas lack level 1 pathways, while others lack level 4 pathways[50]. However, it is safe to say that there will be, on average, pathways at at least 3 qualification levels for each occupational group. If we correct for vertical differentiation, this leaves us with a horizontal differentiation of roughly 200 occupational groups – so less than in Germany. In other words: the most important cause for the high differentiation of the Dutch qualification structure simply lies in the vertical differentiation into four different qualification levels. It is therefore incomprehensible that, in Dutch policy documents, the high differentiation of the qualification structure is routinely attributed to LOBs failing to achieve enough (cross)-sector coordination, without any reference to the number of qualification levels as at least another, and probably a more important, cause of the (perceived) problem.

But that is not all. The extent of vertical differentiation in Dutch VET has gradually *increased* over the last few decades, and the most important actor responsible for this is the state - not LOBs or social partners. Over the years, a policy spiral has occurred to address the 'gap in the Mammoth Act', which has resulted in newly created lower qualification levels. By 1979, the analysis that there was no school-based alternative available for those youths who did not qualify for MBO, and could not find an apprenticeship position or regular job, resulted in the creation of short MBO (now level 2 BOL). By 1990, primary apprenticeship - short MBO was broadly judged as the minimum qualification level of what was necessary to start a not-too-cumbersome labor market career. Paradoxically, the introduction of this starting qualification concept primarily triggered a policy debate on the group that would never be able to reach this level. And actual policy formation promptly translated the original goal into a distinctly different one: the 'need' to create an additional lower qualification level to allow them to graduate with a VET certificate - which has now become qualification level 1. This process was accelerated by a simultaneous policy attempt by the Dutch state (in particular by the Department of Social Affairs and Employment) to stimulate social partners to include lower wage scales into their collective bargaining agreements. Social partners in many sectors initially responded with a 'thanks but no, thanks: we have no need for employment at such levels'. However, the Dutch state used its 'shadow of hierarchy' to get most of them

on board. To summarize: not only is vertical rather than horizontal differentiation the primary cause of the large number of Dutch qualifications, the Dutch state rather than LOBs or social partners has been the active proponent behind the addition of new qualifications by expanding the number of qualification levels.

And third: to the extent that the Dutch state seeks to reduce the number of qualifications, and for a moment assuming that the high extent of vertical differentiation is untouchable, would a reduction of horizontal differentiation be best achieved through a reduction of the number of LOBs? We sincerely doubt it. The German counterpart of the LOBs is one (1) BIBB, under whose umbrella many sector-specific discussions about training occupations occur. The idea to arrive at 4 Dutch LOBs is linked to a similar structure, with more sector-specific discussions about qualifications taking place under their umbrellas. But so far, the umbrella of the BIBB hosts more horizontal differentiation than occurs under the separate umbrellas of the 22 Dutch LOBs. And those 22 LOBs (given the expansion of the number of qualification levels) now host more qualifications than the 32 previous LOLs. Moreover, the recent merger of three LOBs in line with blurring boundaries between their economic sectors (which also hosted mergers (or merger discussions) between training funds and employers' associations) shows that LOBs will indeed merge if labor market changes clearly indicate the need for this. It is naïve to think that the number of separate organizations is either the cause of or the solution to the high extent of differentiation, and it is naïve to think that making LOBs tripartite (including school representatives in each LOB board) would solve the problem.

## 5.6 Analyzing the Dutch skills equilibrium

Like its German counterpart, the Dutch skills equilibrium is a high-skills equilibrium. Both individuals and firms routinely invest in substantial, multi-year, initial, senior secondary VET tracks. There are important similarities in the institutional configuration supporting both high-skills equilibriums. But there are also some intriguing differences.

To start with the similarities: the most important one may be the organization of labor market demand. Both German and Dutch firms (expect to) fill a large share of their demand for new recruits with young graduates from multi-year, occupation-specific upper-secondary VET tracks. For firms, this suggests that work organization in (larger) Dutch firms will more closely resemble that in German firms than in American firms. Although our methodology for this study has not allowed us to settle this matter empirically, the evidence from the (few) available matched plant comparisons including the Netherlands corroborate this picture for at least metalworking and food-processing (cf. section 2.3.8). When controlled for product quality, labor productivity estimates for Dutch food-processing workers are second only to German workers among four European countries (Mason et al., 1993). And

while labor productivity among American pump manufacturing workers is higher than that for their Dutch counterparts, the difference is caused by economies of scale (larger production batches) and higher automation levels. Dutch frontline workers are both more qualified (70% lacking formal qualification in the U.S., vs. only 22% in the Netherlands) and more productive when performing particular key tasks (e.g. American workers taking 50% more time than Dutch ones to set up their machines; Mason & Finegold, 1995). It would be very worthwhile to have more of such matched plant comparisons in the near future, to establish whether similar differences do indeed apply to other sectors, and to more closely settle some specific issues[51]. For our purposes here, the point is that work organization in Dutch firms generally requires substantial intermediate skills just like in Germany. And, likewise, recruitment practices of Dutch firms for such jobs at least entail screening candidates for relevant (senior secondary) vocational credentials. And more often than not, they also include delivering the (work-based) part of that training themselves, either by hiring interns or by offering apprenticeship positions.

One obvious difference in the precise operation of the German and Dutch skills equilibriums is that work-based training is the primary pillar of the former, while a school-based component is the major component underlying the latter (albeit, with work-based training as a very relevant second pillar). In particular, while apprenticeship comprises an almost perfect monopoly on the German VET market, in the Netherlands primarily school-based pathways comprise the majority of that market.

### 5.6.1 Why do Dutch firms train fewer apprentices than German firms?

Von Henninges (1994) estimates that 24.2% of German firms employed apprentices in 1992. Moerkamp (1993) estimates the number of Dutch training firms at 9%. Our own calculations of the number of apprentices in comparison to the number of workers in each country for that period result in a similar difference (Van Lieshout, 1996a: 132).

One obvious factor to be considered when attempting to explain the smaller volume of the Dutch apprenticeship system are apprenticeship costs and benefits. To begin with, we have to consider relative price differences in the cost of apprentices for training firms. Information on costs and benefits of apprenticeship training which is as representative and specific as Von Bardeleben et al (1994a; 1994b; 1995) for Germany is not available for the Netherlands. The closest is a pilot study by De Vries and Heere (1993). They collected data on the costs and benefits of apprenticeship training for 31 Dutch training firms. This sample cannot be considered representative, not just because of its small size, but also because it mostly contains firms with a relatively strong training tradition and highly evolved

training infrastructure. With that caveat, De Vries and Heere (1993) have found substantial differences in costs and benefits between economic sectors. The most important cause of those differences are substantial differences in the costs of apprenticeship wages. While comparing the Dutch and German figures from the aforementioned reports has its limits due to methodological issues and differences, they do suggest that the net[52] apprenticeship training costs for both countries were roughly comparable, possibly even somewhat lower in the Netherlands, in the early nineties (Van Lieshout, 1996a: 116-117). Anyway, the (limited) evidence available does not point towards higher costs for Dutch apprenticeship training as a factor that could explain the smaller Dutch apprenticeship training volume.

That brings us to international differences in the indirect benefits from apprenticeship training for training firms as a possible explanatory factor. Von Bardeleben et al. (1994a; 1994b; 1995) and De Vries and Heere (1995) do not present quantitative estimates of these benefits, but limit themselves to a qualitative overview of indirect benefits as mentioned by their respondents. Both lists are roughly comparable as well. Dutch training firms list the following training motives:

- Apprenticeship graduates who have been trained within the same firm need a relatively short introduction phase on their subsequent job;
- One's own graduated apprentices are broadly employable throughout the firm;
- Quality and employability of own graduated apprentices is judged to be typically better than that of external recruits
- Own graduated apprentices are more involved with the firm;
- Some firms can't find suitable external labor in the external labor market and therefore have to train their own future workforce;
- Some firms train to upgrade their personnel;
- Firms guarantee continuity by taking on the training themselves;
- Firms are confronted with new developments and techniques by providing training themselves;
- Training fulfills an important public relations function for firms.

One other important similarity between these studies for both countries is that many firms in both countries are not very aware of the costs, and even less of the benefits, of apprenticeship training. Attempts to analyze such costs and benefits may therefore be theoretically interesting to establish the viability of a particular institutional incentive structure to stimulate training; but they should not be misinterpreted as an adequate model of how firms actually make training decisions. Firms' training decisions are qualitative policy decisions by one or a few key managers and/or a works council, not the outcome of a quantitative analysis of various policy options. I will return to this issue below.

Since evidence of significant Dutch-German differences in apprenticeship costs, direct benefits of apprenticeship training (labor productivity) or indirect benefits (other real or perceived benefits from training future skilled workers) is lacking, differences in the institutional environment emerge as the most relevant explanation for the difference in apprenticeship training volumes. While there are various differences in the exact regulation of apprenticeship, the main characteristics of both governance regimes are similar enough to fail to explain the significant difference in training volume. The most adequate explanation for that difference seems to be the existence of two important alternatives to apprenticeship training in the Netherlands: equivalent full-time initial VET pathways, and regular (low wage) youth employment.

The existence of fully qualifying school-based VET in the Netherlands goes a long way towards explaining its smaller apprenticeship system. VET for some sectors (in particular the economic-administrative sector) has historically become institutionalized in state-sponsored school-based VET rather than through apprenticeship training. And even in some sectors with a strong apprenticeship tradition, VET for middle management and some technician level occupations became institutionalized through four-year MBO tracks rather than apprenticeship training. In Germany, the FS provide the equivalent for VET for such positions; but access to FS presupposes prior apprenticeship training due to the sequential organization of apprenticeship and (subsequent) technician/middle management training in FS. In the Netherlands, both became institutionalized in parallel tracks and education systems: youths could either opt for front-line worker training in (primary) apprenticeship, or for (primarily) school-based tracks for middle management and technician positions, at age 16.

The consistent influx of new generations of graduates from (primarily) school-based tracks ensures that the external supply of skilled labor is larger than in Germany for firms that opt not to train themselves. This makes that market much less of a lemon market than its German counterpart, thereby reducing an important push factor for German firms to hire their own apprentices (cf. section 3.7.2). If Dutch school-based tracks would indeed be completely school-based, an additional factor reducing the lemon effect would be that a generation of graduates would enter the external labor market in full (including the best among them). In Germany the most talented apprentices will never see the external market, as they will be retained by their training firms, which significantly enhances the 'lemon' nature of that external market. The inclusion of a significant internship component in Dutch school-based tracks should intervene here, however. It is likely that internship firms will rapidly offer good interns a labor contract, which may imply that the graduates entering the external labor market may still be of (on average) lower quality.

Of course, that internship component should serve as a more general and important caveat for misinterpreting the large German-Dutch apprenticeship volume

difference as a similarly large difference in work-based training investments by firms in both countries. The required internship component makes the difference in work-based training overall significantly smaller. Moerkamp (1993) estimates that 30% of apprenticeship training firms and 20% of the other firms offer internships[53]. Obviously, again there are important differences between sectors. Heijke (2001) lists more recent percentages of firms training BBL and BOL students in four economic branches in five regions:

Table 5.7 Percentage of firms with BBL and BOL students

| | BBL | BOL |
|---|---|---|
| | | |
| Healthcare | 41 | 66 |
| Contractors | 59 | 24 |
| Restaurants | 51 | 20 |
| ICT | 24 | 32 |

*Source: Heijke (2001): p. 82.*

As the work-based component of Dutch BOL tracks remains smaller than that of apprenticeship tracks in both countries, the overall work-based training volume in the Netherlands might still be smaller than that in Germany. But it would require a separate study to decide the matter empirically in a satisfactory way.

The more important point of table 5.7 is to illustrate that (initial) training activity in general and the balance between BOL and BBL in particular is quite different in different Dutch economic sectors. This way, the Dutch case underlines that skills equilibriums can therefore be quite sector specific within the same national and legal context. Specifically, in some sectors more Dutch firms prefer the BBL, while in others, more prefer BOL. The Dutch case provides a rich sector variation for a study in the specific institutional elements at the sector level that explain such differences. One important factor that would have to be included is the existence of an apprenticeship training infrastructure, such as an apprenticeship training fund and specific provisions in collective bargaining agreements. Another one is the average firm size: typically, larger firms tend to train more than smaller firms (albeit with exceptions such as the high training activity of many relatively small construction firms). Aalders (1994) attempted to explain Dutch sector differences in (overall) worker training activity and found it difficult or even impossible to construe adequate indicators for important explanatory variables such as technology, product market and government policy to allow for a quantitative explanation. His qualitative study explores various relevant variables. His general conclusion is that sector differences in the average training intensity are to an important extent explained by differences in the structure of the sector (firm size and homogeneity) and differences in the

context of the sector (pace of technological change). Industrial relations figure in the equation, too. Union strength is a factor, though not the most important one. According to Aalders (1994), markets with a low threshold for firm entry, and the position of large firms and/or key persons in the sector are more important factors contributing to training in general and training fund creation in particular. A direct consequence of the sector differences in the Netherlands is that it prevents us from developing a general hypothesis on the preference for either apprenticeship or (more) school-based pathways. The matter simply requires more and different research than was possible in the context of this project.

(Primarily) School-based VET is not the only alternative available to Dutch youths (and firms) for apprenticeship. While regular employment for German youths is a rare exception, regular youth employment is considerable in the Netherlands. A large share of that consists of side jobs of students enrolled in BOL or higher education tracks. Dutch student sponsoring legislation offers substantial possibilities for additional income acquisition above state-sponsored scholarships and loans through such jobs. Student income acquisition though such side jobs has risen sharply over the nineties (Bureau Interview-NSS, 1999), and there are estimates of 55,000 higher education students occupying the equivalent of 30,000 full time jobs requiring no more than VBO or MAVO credentials (Nrc, 1999). OECD figures indicate a concentration of Dutch (and American) youth employment in some below-average skills sectors such as hotels and restaurants, personal services, and wholesale and retail trade and repair (OECD, 1996b; cf. section 3.4.4). In the Netherlands, the system of youth minimum wages makes regular employment of young workers a cost-attractive option for wage-competitive firms, which then do not have to compensate for such low wages by offering (regulated apprenticeship) training. Regular youth wages (while somewhat higher than the legal minimum youth wages) are hardly higher than apprenticeship wages. And with regular youth employment there are no limits on the productive deployment of regular young workers, or requirements to provide training in general, let alone for skills which this individual firm has no direct need for from this worker. In Germany, low youth wages are always apprenticeship wages that compensate young people for low wages with institutionalized training rights (as is the case in Dutch apprenticeship). The German Apprenticeship Act in fact forbids training (and thus, hiring) youths of up to age 18 outside of the apprenticeship governance regime in formal training occupations. To be fair: the existence of sector training funds and financial incentives provided by the government (first a subsidy, then a fiscal facility) do compensate Dutch training firms for part of their related apprenticeship training costs, while such incentives are generally lacking for German training firms. The point is, that while many (smaller) German firms hire apprentices for (in part) their direct (and cheap) productive contribution, similar Dutch firms will often opt to hire such labor through formal regular youth employment. Both practices have

their advantages: while the aforementioned German apprenticeship positions are certainly not the most attractive ones, at least these young cheap workers have some established training rights that regular young Dutch workers lack. To the extent that the latter are simultaneously enrolled in a school-based VET program (as many, though not all, are), the latter then does not necessarily mean that they lack training altogether. But, in retrospect, it is surprising that all the attempts to further stimulate work-based training in the Netherlands have focussed on replacing school-based components by work-based components. The more promising avenue of trying to substitute low-wage regular youth employment without institutionalized training rights by work-based training linking low youth wages to such rights has hardly received any attention.

Once again: firms' training decisions in practice are not the outcome of a quantitative assessment of various human resource policy options. While such assessments are helpful in attempting to formulate hypotheses to explain differences in training intensity, they do not model the actual decision-making process. This brings us to another level of explanation for such differences: differences in the conceptions of control of key actors (firms, employers' associations). Chapter 3 emphasized that German firms have historically wanted to keep the government from seizing control over training issues, in part because they fear that school-based training would fail to achieve the same standard of craftsmanship. As there generally have not been any full-fledged school-based VET tracks, their skepticism in this respect is understandable. The chapter also showed how, as a result, the government has leverage to 'blackmail' firms and their associations into more training in bad economic times by threatening to impose a firm levy. This dynamic is quite different in the Netherlands. While there are sectors (like construction and metalworking) with a strong history of and belief in apprenticeship training, many other sectors and their firms lack such traditions. Instead, these latter sectors will primarily or exclusively have (good) experiences with MBO/BOL tracks. And even sectors with a strong history of apprenticeship training like metalworking and construction also have good experiences with MBO/BOL tracks - in particular for supervisor or technical specialist types of level 4 qualifications. In sum: the more obvious but far from negligible explanation for differences in apprenticeship volumes between both countries lies in firms' conceptions of control *vis-à-vis s*kills policies. In those of German firms, apprenticeship tends to be the primary option considered, while for many Dutch firms, it may not even figure into their consideration at all.

Such differences in conceptions of control translate themselves into different strategies of associations. While German employers' associations have tended to want to restrict government intervention, their Dutch counterparts mostly represent firms that either rely in the first place on (primarily) school-based tracks for skilled graduates, or at least do so to some extent. Moreover, even Dutch firms that exclusively train apprentices have appreciated the financial incentives

the Dutch government has provided. This helps explain the fact that Dutch employers' associations have tended to take a different position from their German counterparts, where it comes to government intervention. They stress the fact that initial VET is first and foremost a government responsibility. The government in turn also has a different conception of control than its German counterpart. Faced with employers calling for a prime role for government in initial VET provision, as well as with schools, their interest organizations, and teachers unions, it is quite understandable why the few more or less radical calls for a dualization of school-based VET by advisory committees have never been met. Add to this the fact that MBO and now BOL have always functioned relatively adequately. As a consequence, even if Dutch government would have wanted to achieve such dualization, it could obviously not deploy similar 'blackmail' ('shadow of hierarchy') techniques, as the German government has been able to fall back upon.

More difficult to explain are differences in the conception of control of the labor movement in both countries. While the German labor movement has seen an apprenticeship system with a limited extent of vertical differentiation in qualifications as an important tool to ensure interest congruence among their membership, the Dutch labor movement either has not, or has failed to reach that goal. The matter is interesting enough to warrant a historical comparison of the evolution of union stances in this matter.

### 5.6.2 Why do Dutch youths opt for school-based VET?

Section 3.6.1 explored the reasons why large numbers of German youths opt for apprenticeship training (cf. Van Lieshout, 1996a: 59-73). While apprenticeship numbers are considerable in the Netherlands, (primarily) school-based tracks remain the main VET route. How can this difference be explained, in particular given the basic similarities in the institutionalization of apprenticeship in both countries? We will revisit the reasons explaining German apprenticeship popularity for possible answers.

An important part of the international difference can be explained by the availability of (primarily) school-based VET tracks in the Netherlands, which have supplied training more or less equivalent to apprenticeship training in pre-WEB days, and formally equivalent (awarding the same diplomas) under the WEB. This explanation may sound obvious, but it is also obviously relevant: if there is only one route, participation in that route will be higher than in a country that also provides an alternative route. Of course, this begs another, historical question: how did school-based VET become the dominant VET route in the Netherlands over the past century, while apprenticeship became the dominant VET route in Germany? Empirical research for this project was not targeted to answer this historical question, and therefore cannot hope to answer it satisfactorily. But some clues are available.

In chapter 3, we saw that employer (and their associations') preferences are an important part of the answer to this historical question for Germany: employers preferred to keep the state out of VET affairs. For the Netherlands, the 'schools battle' at the start of the twentieth century presents itself as a relevant factor. It ensured that the elites in the various social pillars were keenly aware of the relevancy of (their own) schools to socialize their own groups. As Dutch schools thus (amongst many other things) became a part of the strategy of various social groups, this may help explain the prominence and high status of education and schools in the Netherlands. Subsequently, in the second part of that century, education became a prominent part of the socio-democratic political strategy to promote the chances of upward social mobility for workers' children. The architecture of the 1968 Mammoth Act reflected this goal, particularly with the inclusion of a VET-based progression route through the education system (up to university) as an alternative to the purely general and academic route. Formally, apprenticeship has always remained a separate system outside this articulated education system. As education has, to an important extent, helped to substantially increase the chances of upward mobility for workers' children, parents have come to value (school-based) education as very important for the future chances of their children. Over the past decade, one consistent theme that crops up in interviews with professionals employed in (the governance of) Dutch VET in general and apprenticeship in particular are complaints about the less favorable status of apprenticeship (relative to full-time school-based tracks) among students and (as importantly) their parents. While we offer the former historical hypothesis as no more than that, these contemporary effects of different experiences of past generations with school-based and dual tracks in Germany and the Netherlands are having lasting effects on the choices of present and future young generations. While Dutch apprenticeship has long been a substantial and good source for new craftsmen, it has always been more of a hidden gem than its German counterpart - somewhat in the shadow of a larger school-based VET system. This results in substantially fewer parents having direct or indirect experience with dual tracks, while all have experience with school-based tracks. In contrast to this, most German parents have experienced an apprenticeship themselves and are therefore familiar with the form. And the standard expectancy for most German youths was and is to enter the labor market through apprenticeship sooner or later. Apprenticeship being the largest form of education and training for late teens in Germany, the German media have also tended to give it the attention it deserves. Dutch apprenticeship has never had this size, or this cultural status, or the public attention.

There is a link here with a separate reason listed to explain the attraction of apprenticeship for German youths: the availability of interesting further training opportunities upon apprenticeship graduation. In general, Dutch pre-WEB apprenticeship allowed continuation from one apprenticeship level to another, but

did not result in more attractive return opportunities back into the school-based education system. In particular, the difference lies in the parallel institutionalization (next to apprenticeship) of middle management and technician training in Dutch MBO and its ancestors, as opposed to their sequential institutionalization (after apprenticeship) in Germany. The historical fact that technician and middle management VET became institutionalized in German 'Fachschulen' (FS) that presupposed prior apprenticeship training helps to explain the larger German apprenticeship training volume in two ways. First, it offers a simple and direct explanation in that those who later participate in FS will have had to participate in apprenticeship before that, while the comparable Dutch group entered MBO (and its ancestors) directly and without prior apprenticeship training. Second, it offers an additional element to explaining the status differences in the perception of students and parents of the appeal of apprenticeship. It matters whether an apprenticeship contains just future (frontline) craftsmen, or also includes future craft specialists and their immediate managers. And it matters, whether an apprenticeship system is considered the straight course for (and a necessary prerequisite for entry into) specialist and middle management occupations. While in the Netherlands schools training for such positions directly competed with apprenticeship in attracting students, in Germany apprenticeship was not only saved this competition - the prospect of possible later entry into these FS actually even strengthened the appeal of the apprenticeship system.

Apprenticeship takes two to tango, so another part of the explanation will have to involve the strategic choices of employers rather than apprentices. Historical hypotheses that warrant further research here are, first, that the gradual development of developed full-time VET schools has led many branches to organize their training within that context. Or perhaps schools themselves (or the state) may have simply beaten the employers to organizing it first. Either way, while Dutch apprenticeship is spread across a larger part of the economy than its American counterpart, much of it is indeed concentrated in industry and craft sectors with a longer history, originating at a time when there were no developed VET schools around. Much less apprenticeship (and if so, in smaller apprenticeship numbers) is found in service sector occupations that evolved in a later period - certainly in comparison with Germany. If VET schools come to offer training for new and growing occupations while apprenticeship doesn't, the former will gradually expand their scope and numbers more than the latter.

In addition to a school-based VET alternative, the Netherlands offer a third route to its young people: regular youth employment. While German employers have generally offered youth jobs in the form of apprenticeship positions, Dutch employers in various sectors hire a significant number of youths in regular jobs at (or, more often, slightly above) the regular youth minimum wage. To be sure: a significant share of these jobs are actually part-time jobs filled by (VET or higher education)

students, in which case the route is not an alternative to (school-based) VET. But the fact remains that regular employment for youths is more readily available as an alternative to continued VET than it is in Germany. This will also explain part of the lower Dutch apprenticeship numbers - in particular when we realize that some German apprenticeship positions are offered primarily because of the positive balance between apprenticeship costs and apprentice productivity over the training period (or after a short period of continued employment upon graduation).

We consider these two more readily available alternatives to apprenticeship (school-based VET and regular employment) for Dutch youths the most important explanations for the German-Dutch difference in apprenticeship volumes. To complete the comparison with Germany, we will briefly discuss the remaining elements used to explain the appeal of German apprenticeship for young people.

One element explaining the appeal of German apprenticeship was the lack of formal entry requirements, which makes it an option for everyone who manages to find a firm willing to train him/her. Dutch pre-WEB apprenticeship did have formal entry requirements, which may have prevented some apprentice-wannabes from participating. But this translates only into a smaller apprenticeship volume to the extent that the apprenticeship positions they could have hypothetically filled will either never have materialized, or have remained vacant. As in most cases a firm looking for an apprentice will have been able to find one who met the admission requirements, the extent to which the German-Dutch participation differences can be explained by this institutional difference is limited. In addition, subsequent apprenticeship tracks at WEB levels 1 and 2 do not have formal admission requirements.

Another factor was that apprenticeship wages (while relatively low) still were more attractive financially in Germany than scholarships for school-based students. It is notable that Dutch state-provided scholarships for full-time school students have allowed for relatively ample opportunities to gain additional income through side jobs over the last two decades. But, as I mentioned in section 3.6.1, one should not overestimate the importance of short term financial consequences as a factor in the decision making process of young people.

As in Germany, Dutch apprenticeship has generally provided good labor market prospects. While the Dutch culture of certified craftsmanship is not as pervasive and elaborate as in Germany, certified apprenticeship does indeed hold value in the relevant labor market segments. There are some institutional differences, such as the fact that Dutch social security has not distinguished occupational unfitness from labor unfitness. But again, one should not overestimate the relevancy of such reasoning in the actual training decision making process. More important is the difference in (sector) scope of apprenticeship. In Germany, banking apprenticeship has long served as a prime example of how apprenticeship could pave the way to careers in a promising, secure (and white collar) employment sector. As a simple

result of the relatively smaller scope of Dutch apprenticeship, the argument of subsequent good labor market prospects and (more importantly) entry lanes into many internal labor markets will presumably have applied to a lesser extent to the Dutch situation - objectively, as well as in the perception of youths and their parents. And, perhaps most importantly, we have already discussed the parallel institutionalization of technician and middle management training in Dutch MBO and its ancestors, as well as its consequences.

Finally, in section 3.6.1 we have applauded the strong and steady institutionalization of the German career information centers - themselves role models for the later development of such centers in Wisconsin and other American states. The responsibility for career information has not been institutionalized as straightforwardly, and has certainly not been stable. While the Dutch PES of course has had to include an apprenticeship as a possible employment opportunity for the unemployed, it has lacked such separate specialized and proliferated centers for this task. There have been and are career information centers, separate from the PES, but these have changed and switched names repeatedly, and their status and market share has not come close to that of their German counterparts. Both these things may partially be accounted for by the fact that apprenticeship was strongly coordinated at the sector level, nationally through the LOLs, and regionally through the regional apprenticeship bodies and other sector-specific types of regional training organizations and partnerships. But the advantage of regional, economy-wide career information centers with a large market share in terms of reported apprenticeship vacancies and, as a result, many visitors, should not be underestimated. It simply increases the chances of clearing the market by matching supply and demand, and helps stimulate both supply and demand.

### 5.6.3 Summary and conclusion

In sum: Dutch work organization and firms' recruitment practices have put a premium on substantial initial VET for youths much like in Germany. But while in Germany all those incentives channel young persons into apprenticeship (or higher education), the Dutch governance regime offers more ways, both to firms and youths. For one, both firms and youths can opt for work-based and (primarily) school-based tracks offering a full vocational credential. Second, firms and young people both have the alternative of regular low (youth) wage employment much more readily available to them than their German counterparts. While German youth employment is predominantly institutionalized in apprenticeship training (and thus includes training rights), there are some Dutch sectors that employ a large share of young people in regular employment not linked to formal training provision. This segment of the youth labor market seems to bear more resemblance to the American example of (non-college) youth jobs that offer relatively unstable

temporary employment spells, rather than giving access to corresponding labor market careers in such segments. Both the important role of school-based VET and the more prominent role for regular youth employment without training in some sectors help explain the smaller supply of apprenticeship training in the Netherlands as compared to Germany. In addition, the relative importance of dual, more school-based initial tracks and regular youth employment differs significantly in the context of similar national legislation. This underlines the importance of sector level variables, and warrants more analysis. One important explanatory variable to be considered is differences in conceptions of control of firms and other relevant actors: previous experience with particular strategic skills policy options tends to shape such conceptions of control in ways that tend to reinforce the continuance of past practices.

## Notes chapter 5

[1] In conjunction with its particular ideology, the liberal pillar was the least 'pillarized' of the four pillars. In many social sectors, for instance, one would only have separate Protestant, Catholic and social-democrat organizations; and hierarchical (and cross-organizational) interest coordination seems to have been weakest within this liberal pillar.
[2] A similar subsidiarity principle has since been adopted at E.U. level, in respect to the division of responsibilities between the E.U. member states, as well as regions within those states.
[3] VNO-NCW and MKB Nederland are currently discussing an integration of their business processes while presevering their separate identities
[4] The German state has institutionalized a forum (Bündnis für Arbeit) for joint negotiations between the federal government and peak associations of unions and employers in the second half of the nineties, to try to alleviate unemployment and strengthen German economy's competitiveness. The Dutch example of the 'Wassenaar' Accord and later Accords has inspired the German state to pursue this road, but progress has, so far, been modest. Cf. Bundesregierung (1999) for negotiations on the specific topic of VET.
[5] One notable example is an act that regulates health care occupations that entail individual patient care, which also regulates senior secondary level occupations besides tertiary ones. But it is a good example of the trend towards less (strict) regulation of this kind, as it replaces previous legal stipulations that were based on the shared principle of limited access to such occupations. The new act is based on the principle of free access to these occupations. Only *specific* health care actions are to be undertaken by specifically qualified personnel. In addition, some occupational titles are protected and reserved for specially qualified personnel (http://www.bigregister.nl).
[6] A new collective bargaining agreement has changed the four phase systems into a three phase system, which preserves the key changes discussed here.
[7] Van Velzen (2005) compares temp worker training and its institutionalization in the Netherlands and the U.S. in the process of a broader comparison of flexible worker training in construction and information and communication technology in both countries.
[8] The court has summoned the Dutch government to expand minimum wage protection to 13- and 14-year olds (who have been allowed light work for limited hours since 1996) by the summer of 2004, ruling in favor of the unions FNV-CNV. Compare Rechtbank 's-Gravenhage, 11 december 2002.
[9] In addition, there are mixed, merged schools which combine schools of various denominations, or public and privately run schools.
[10] SER and WRR are prominent general governmental advisory bodies that also may address educational issues.
[11] There is a separate stream of special schools in primary and secondary education for children with learning and behavioral difficulties, and there are separate schools for children with disabilities preventing them from adequate counseling at regular schools.
[12] The age was lowered from 6 to 5 in 1985. Today, approximately 99% of 4-year olds already attend primary schools.
[13] One is obliged to finish the school year when one reaches the age of 16.
[14] Provided they started their current studies before the age of 30.
[15] Higher education student funding has changed repeatedly over the last decades. We will] abstain from a detailed overview of all those changes.
[16] Complaints of curriculum overload and fragmentation have recently resulted in changes.
[17] Agricultural VET falls under the jurisdiction of the Department of Agriculture, not the Department of Education. Agricultural VET is provided by separate AOCs rather than ROCs. We will exclude the agricultural sector from our subsequent analysis.

[18] Labor market governance and policy for reintegrating and training the unemployed has hosted several policy shifts over the years. We will not discuss these here. Cf. Sol (2000) for an overview and analysis.
[19] As of 2003, admission requirements (a diploma from VMBO or one of its ancestors) are introduced for level 2 tracks, provided there is a corresponding level 1 track for the same occupational group. In addition, admission requirements for senior secondary VET will become sector-specific.
[20] In 1993, 22 LOBs were created through mergers of similar but separate bodies for apprenticeship and MBO. 3 (electro, metalworking and installation technology) of them have merged in February 2003 into one KBB for technical craftsmanship (including the information and technology sector).
[21] LOBs either have a bipartite board consisting of an equal share of union and employer representatives, or a tripartite board which also includes an equal share of school representatives (WEB article 9.2.1). LOBs with bipartite boards are required to have a tripartite education-business committee where school representatives occupy half of the seats. For such LOBs, it is this committee that actually submits the qualifications and skill standards proposal for the economic sector to the Minister of Education.
[22] There is a separate qualification structure for adult education.
[23] The draft for the WEB actually proposed something different. There would be one pathway at each qualification level, with a predetermined size for its work-based component. Objections from business and schools resulted in the Department adopting this two-pathway approach (cf.]. Van Lieshout, 1997d).
[24] Exemptions of half a year or more are possible for students graduating from a related upper secondary VET course.
[25] Since 1998, HBO colleges can offer a dual variant of each full-time track.
[26] HBO graduates may be exempted from parts of the course.
[27] All schools must report each education participant up to 23 years of age, who has not yet earned a starting qualification and who has been absent from his or her study program for one month, to the local authorities in his or her city of residence.
[28] Note that many of these graduates will in fact have followed pre-WEB pathways, particularly at higher qualification levels.
[29] This implied that the state appointed a lesson table for related instruction, with the LOLs responsible for the programs for the work-based component.
[30] Informally, of course, apprenticeship is a quite secure bet for German youngsters, since a very high percentage of apprenticeship graduates are offered a regular labor contract by their training firm upon graduation.
[31] But the act does create the opportunity to prolong the training contract to allow an apprentice to take the next exam. The act also explicitly creates the opportunity to conclude a training contract for a shorter period than training duration, conditional upon approval of the LOL.
[32] LOLs may waive this legal stipulation to allow an apprentice to graduate (Laman Trip, 1976: 45).
[33] One of them (Philips Education Association) was actually not a sector body, but an organized apprenticeship for a large Dutch multinational.
[34] Over the years, orientation and linkage courses were developed for those lacking such qualifications to gain access to primary apprenticeship.
[35] Employers specifically put forward the coupling of training contracts to labor contracts as an important source of drop-out, a point also noted by other observers (Laman Trip, 1976: 46). Peak employers associations emphasized that 13.7% of 1978 (primary) apprentices had to abort apprenticeship training because of the legal dissolution of their labor contract, and emphasized the detrimental nature of the 'last in, first out' principle in this respect (VNO & NCW, 1980: 43). Closer scrutiny of the relevant annex reveals that this was actually the third most important reason for contract ending, after failure to attend compulsory related instruction, and change of occupation.

[36] General wage freezes and wage moderation and the specific lowering of youth minimum wages at the time already by themselves provided a basis for such deterioration (cf. sections 5.2.2 and 5.2.3).
[37] Many of the regional partnerships in metalworking were former firm apprenticeship schools (Hövels et al., 1989).
[38] An interesting difference between both committees is that the Rauwenhoff committee included university education (with HBO, MBO and apprenticeship) in its definition of vocational education.
[39] At the time, labor market governance had just become an explicitly shared responsibility of the state and social partners, with tripartite regional labor market boards. Since then, the role of social partners in labor market governance has been strongly reduced, the system again overhauled, and the current system combines public governance with private-for profit labor market intermediaries and reintegration firms. Cf. Sol (2000) for an extensive analysis.
[40] Covenants with the HBO and university sector were not concluded; implications were discussed in regular negotiations between government and these sectors.
[41] This research subsequently reported that dualization was a topic of discussion in sectors, and found a generally positive attitude towards it (Hövels, 1992). But opinions on the topic were quite balanced, and the positive attitude was not expected to immediately host (nor did it later translate into) a flurry of sweeping initiatives.
[42] Agricultural schools, under the jurisdiction of the Department of Agriculture, remained separate from ROCs offering VET and adult education for the other three sectors.
[43] An internal memorandum of the Dutch Department of Education on the report reflects the disappointment at that time by at least the author. The memorandum speaks of a "committee which wants to re-establish the hegemony of school-based VET in the Netherlands and to close the discussion over the relation between labor market and education". I personally think that by that time a difference of emphasis had emerged between the government and the (VET directorate) of the Department of Education at that time. With the latter group still attracted (not without reason) by the thought of a very strong work-based component, the former group probably declined (not without reason) to face what would have been extremely fierce opposition from the MBO sector and employers, if it had adopted a policy resembling the Rauwenhoff proposal on this theme. The Minister of Education of those days was stuck somewhere in the middle.
[44] At that time: 46 ROCs, 13 sector schools, 2 denominational schools, 2 schools for the deaf and 2 MBO schools integrated with HBO colleges.
[45] Van der Velden (2001) reported no decrease, Geerligs et al. (2002) a slight decrease.
[46] Although students of these first post-WEB generations were themselves less satisfied about the linkages than the last pre-WEB generations.
[47] Which means that the Dutch state itself, in this respect, violates its own law, which still requires the same procedure.
[48] Compare Van Lieshout & Van Liempt (2001: 31-35; 37) for a more extensive analysis of this interesting initiative.
[49] From our pre-WEB research for the WRR (Dercksen & Van Lieshout, 1993), we came across the following example. A retail MBO school lowered its internships standards to allow students to complete an internship at a simple gas station when facing a (recession induced) lack of better internship opportunities - just because the students otherwise would not be able to complete their education.
[50] The latter poses a problem, as only level 4 qualifications give access to HBO, so graduates of level 3 tracks where there is no corresponding level 4 track find themselves at a dead end should they prefer to continue their career in the education system. Policy responses to address this issue are in progress.
[51] One of them would be the relation between wage levels, firms' competitive strategies, and the resulting work organization in both Germany and the Netherlands. The Dutch

wage moderation policy has sometimes been (dis)qualified as a 'begging thy neighbor' policy, offering quality products and services at (slightly) lower wage costs than German firms. Does this policy in fact translate into slightly lower wages in comparable Dutch firms? And, do these lower wages then translate in a slightly smaller focus on product quality in firms' strategies, and in a high-but-not-as-high-as-in Germany skills equilibrium?

[52] Apprenticeship costs minus the labor productivity of apprentices (which is the direct benefit of employing apprentices).

[53] Combined with the 9% offering apprenticeship training, this would imply that 27% of Dutch firms offered some form of work-based training in the context of initial VET - which would be even higher than the 24% listed for Germany for 1992 by Von Henninges (1994). But as Moerkamp's study is based on empirical research in just 11 economic branches, all of which have a regulated apprenticeship system, its basis is not suited to actually consider it representative for the entire economy in this respect.

# 6 Analyzing markets for intermediate skills: different hands

## 6.1 Introduction

Our ambition was to analyze and compare how empirical markets for intermediate skills operate under different governance regimes. We expected such governance regimes to consist of a combination of different governance mechanisms that influence each other and the choices actors make. The question underlying the national case studies and their comparison in chapters three through five was:

How do markets for intermediate skills operate in each of these three countries?

Each chapter addressed the following questions for each of the three cases:

- What options for vocational education and training exist?
- Which rules and actors govern them?
- How does the interaction of these rules and actors help to explain the actual choices of young people and employers regarding VET?

The institutional order, actors' strategies, and their interaction, were analyzed for markets for intermediate skills in (West-) Germany (chapter 3), the American state of Wisconsin (chapter 4), and the Netherlands (chapter 5) as they operated in the early and mid nineteen nineties. The existing VET options and the rules and actors governing them were described and analyzed, culminating in an analysis of how the interaction between those rules and actors helps explain the empirically observed choices of young people and firms in those countries. As each country chapter described and analyzed its national case by already contrasting it with the previous one(s), the three markets were simultaneously compared along the way.

The central argument of this book is that empirical markets for intermediate skills are indeed (as chapter 2 argued theoretically) governed by multiple, interacting governance mechanisms, which constitute a particular governance regime. Different governance regimes result in different strategies available to actors and/or in different expected benefits to similar strategies. In this sense, institutions can help explain different behavior by similar actors in different markets. Simultaneously, actors in training markets are not just passive respondents to incentives posed by certain external rules. Actors have their own action orientation, their own conception of control on how to operate effectively in their environment to acquire the skilled workforce they need. A conception of control is simultaneously a worldview that allows actors to interpret the actions of others and a reflection of how the market is structured (cf. section 2.3.6.3). Such conceptions of control are influenced by past and present institutional aspects of the actor's environment (e.g. the industrial relations system in which they operate) and the incentives it implies

in terms of the expected benefits of certain strategies. But conceptions of control are also interdependent: action orientations of some actors will in turn help shape those of others. For instance, firms' typical skill strategies in a certain sector in a certain region will result in particular types of job openings and training options being available. The historic availability of such options will in turn shape the action orientation of (future) workers concerning their own strategic choices. Different action orientations of similar actors will result in different reactions to certain rules or reforms, and therefore help explain the relative stability of major differences between different markets. Governance regimes should thus not be interpreted exclusively as if pure and perfect stimulus-response relations would exist between external rules (institutions), the incentives they entail, and the resulting actors' strategies. Comparing markets for intermediate skills shows the delicate balancing of the quasi-objective incentives posed by the institutional environment and actors' own strategies in markets for intermediate skills. Crouch et al. (1999) have used a similar approach in their book on the skill creation in advanced industrial countries.

This final chapter will first answer the central question in section 6.2 by summarizing some main characteristics of the operation of markets for intermediate skills in different countries, the regimes that govern them, and the skills equilibriums they support. Next the chapter will reflect on the theoretical perspective that we used to analyze our three cases. In particular, it addresses the question if and how it was worthwhile to use a governance approach that explicitly targets multiple alternative coordination mechanisms (markets, firms, state, and associations) and their interaction. Couldn't we achieve similar results with a less extensive typology of governance mechanisms? Sections 6.3 through 6.6 will reflect on the role of the specific governance mechanisms (firms, state, markets and associations) in our analysis of the cases: if and how is each of these specific governance mechanism relevant for our analysis of the cases?

## 6.2 Three different markets for intermediate skills

German, American and Dutch markets for intermediate skills show substantial differences in their operation, despite some similarities such as the existence of apprenticeship legislation.

### 6.2.1 Germany

Chapter three analyzed the high-skills equilibrium supported by German apprenticeship and other institutions. The German market for intermediate skills has continued to attract much international attention because it is one of a very few where individual firms' investments in formal VET account for the majority of

VET investments. In section 3.7.2 we followed the rest of the literature (e.g. Casey, 1986; 1992; Steedman; 1993; Soskice, 1994) in distinguishing between larger and smaller firms when explaining why so many German firms choose to train apprentices. For smaller firms, apprenticeship costs are so low as compared to (in) direct benefits, that it is plausible that firms will already recoup their costs during the training period, or if only a small number of apprentices stay on for a short while upon graduation. Larger firms on average incur significant costs during the training period, which is why additional reasons beyond short-term cost-effectiveness are needed to explain their persistent training efforts.

Soskice (1994) distinguished two conditions which help to explain these larger firms' training investments. First, if firms do not recoup the full costs of training over the training period itself, the retention rate of apprentices becomes important. The more apprentices stay on for a longer period, the more additional (in)direct benefits of training will be recouped. The other crucial factor is the relative price of training as compared to the price of alternatives. Firms will train as long as the costs of apprenticeship training are less than the costs of firm-specific training for external recruits plus the costs of risking recruitment of a 'lemon' (a person hired in the external labor market that turns out to be less than adequate). With this second factor, the choice of other actors become a core ingredient into the decision making process: as long as most firms choose to train, it is not only feasible but smart to train yourself (because of the substantial 'lemon' risk of not training yourself).

Within the German institutional (education and labor market) environment, it does not only make sense for the large majority of German firms to invest in apprenticeship training (section 3.7.2), but for the large majority of German youngsters (section 3.6.1) as well. The key reason is, that German firms predominantly recruit their future skilled workers as apprentices they train themselves. Soskice (1994: 33) has pointed out that German apprenticeship is a rank-order tournament. Not each apprenticeship position is equally attractive, and school-leavers rank apprenticeship across sectors, firms, and even within an individual firm. German youngsters actively compete for the best apprenticeship positions, as career prospects differ with the occupation and firm in which one is trained. (The more attractive) Firms carefully screen school performances of applicants, and often administer their own tests as well. This creates an important feedback effect: German children are stimulated to work hard in school in their early teens, as they will be rewarded for their efforts by a more attractive apprenticeship position in their late teens.

And this feedback effect causes another feedback effect: because young people tend to work hard in school in the years before apprenticeship, German firms get apprentices with a relatively decent (general) skills basis. This helps them to keep training costs low, as compared to firms in countries where 16-years-olds are not as qualified.

The German case shows that as long as children already start working hard in

school, and firms reward their efforts with the more attractive entry jobs with related career prospects, a stable high-skills equilibrium in the market for intermediate skills is possible. We noted that this high-skills equilibrium is achieved through a market that is free (in the sense that firms as well as apprentices are free to enter the market) but regulated (though apprenticeship legislation and related regulation such as skills standards for training occupations). And we noted that it achieves overlapping occupational and internal markets that tend to combine advantages of both.

### 6.2.2 The American state of Wisconsin

Our next case, the U.S. (chapter four) showed us why such a high-skills equilibrium is harder to achieve than the German example might seem to indicate. The U.S. suffers from what has been labeled a 'missing middle' on its labor market (Berryman et al.; 1992: 1).

An important cause for the difficulty that American young people experience in finding career jobs lies in the functioning of American labor markets. On the one hand, occupational labor markets are underdeveloped. On the other, American internal labor markets have typically not demanded high skills from new recruits, but have relied on gradual informal on-the-job learning for incumbent frontline workers.

The small size of apprenticeship is a case in point for the underdevelopment of occupational labor markets. Only in unionized construction has apprenticeship traditionally provided a basis for occupational labor markets (sections 4.2.5 & 4.3.2). Outside unionized construction, apprenticeship positions are either completely lacking (as in the banking sector, cf. section 4.3.4) or reserved for the training of a small incumbent worker elite (as in the metalworking sector, cf. section 4.3.3). This German-Wisconsin difference is all the more intriguing as the Wisconsin (adult) apprenticeship regime was explicitly inspired by the example of *German* apprenticeship legislation from the early 20th century (cf. Van Lieshout, 1996b)[1]. Apparently, mimicking (apprenticeship) legislation will not necessarily lead to similar results. While there were differences in apprenticeship legislation between both countries in the mid-nineties, other factors seem more important to explain the diverging paths both apprenticeship systems took.

For one, the lack of multi-firm collective bargaining agreements that set relatively high minimum wage rates across sectors and regions in Wisconsin implies that Wisconsin firms can more readily train regular workers informally at lower wage levels than their German counterparts. Because starting wages for regular workers can be lower in Wisconsin than in Germany, and because apprentice wages are relatively higher, there is a substantially slighter (if any) benefit (in terms of lower training costs) in apprenticing somebody over hiring him/her as a regular worker to train informally on-the-job.

A second important factor is the fact that American firms face few constraints on lay-offs as compared to their German counterparts. The combination of both enables American firms to more readily pursue business strategies focusing on low wages and numerical flexibility. Tayloristic work organization and Fordist production methods originated in the U.S. and shaped work organization in American firms. Important evidence for its effect on training policies and apprenticeship in particular comes from Parker's historical research on the attempt to create a German-style apprenticeship system in Wisconsin metalworking in the Milwaukee district in the first decades of the 20th century (Parker, 1994; 1996). Parker discovered that while these metalworking employers had been active in organizing apprenticeship in the nineteen twenties, they were at the same time eroding the basis for it by gradually adopting Tayloristic and Fordist production methods that would leave the majority of their workforce in *semi*-skilled jobs. Thus, they subsequently had less need for intensive apprenticeship training to the journeyman level. In the nineteen nineties, the lower levels in the work hierarchy in many metalworking and other industrial firms were still relatively low-skilled.

Third, higher wage differentials make it easier to poach trained workers than in Germany. 'Poaching', is not necessarily a pirating action by another firm, but may very well be a consequence of a worker's own choice to leave, as some historical explanations for the decline of American apprenticeship in the nineteenth and early twentieth century have argued (cf. Elbaum, 1989; Jacoby, 1991; Elbaum & Singh, 1995).

Furthermore, Wisconsin's technical colleges provide a quality school-based alternative to apprenticeship training, whereby the cost of training is shared by the student and the state.

Finally, one cannot neglect the fact that the image of apprenticeship as an institution in the U.S. has always been strongly connected to union involvement (more so than in Europe) with the prestige of American unions being much lower than their German and Dutch counterparts (cf. Jacoby, 1991).

Internal labor markets can be seen as a mechanism to prevent poaching, since these limit access to the most attractive jobs to those who stay with their firm (Sako, 1991). American internal labor markets have been characterized by the aforementioned Tayloristic and Fordist tradition of work organization in American industry. First, jobs on the lower rungs of the internal career ladder are relatively low-skilled. Second, promotion is often granted according to formalized job ladders and seniority rules. Outsiders are typically hired predominantly on the bottom rung(s) of these job ladders. Since these entry-level jobs are not apprenticeships, young people are as expensive to hire for those jobs as adult workers. This is why American employers have generally preferred to hire adults with some relevant work experience for such positions (Osterman, 1980).

Theoretically, an ample supply of quality school-based training and a massive

participation in it could compensate for a lack of work based training for young people. But American internal labor markets have given young people little reason to enroll in demanding school-based VET courses:

- First, opportunities for entering other firms on higher job rungs are scarce, so VET certificates do not directly qualify for more attractive occupational labor markets; of all workers, a staggering 94.2% of German workers indicated they had needed qualifications to obtain their current job, as compared to only 55.8% of their American counterparts (OECD, 1994b: 144);
- Second, entry-level positions in American internal labor markets typically don't require many skills;
- Third, formal general or vocational credentials have typically counted less than seniority for promotion to higher rungs on internal career ladders;
- Fourth, pay-rates are based solely on the characteristics of the job, not on that of the worker – or his/her credentials. As an indicator, the relative importance of human capital variables to industry variables in explaining inter-industry wage differentials is substantially lower in the U.S. than in Germany (Bellmann & Möller, 1995: 153).

Most non-college bound youngsters have therefore historically opted to directly enter the labor market, accept an un- or semi-skilled job as attractive as can be found, and slowly work their way up from there.

While American labor markets on average do reward high school graduation somewhat in terms of a wage premium, American firms do not put much trust in a high school diploma per se. Apparently, the lack of competency standards lets schools for younger age groups simply pass their failures and problems up to the top of the system (Tucker, 1994b: 3). And this lack is not compensated by rigorous screening of high school records by employers when they hire youngsters and young adults. For first employers, a certificate in itself tends to be enough. There was no relation between school performance and the attractiveness of first jobs in the U.S. (Rosenbaum & Kariya, 1991). And by the time that the young adult finds an employer that offers him a more (career) promising entry-level position on an internal labor market, this employer will find an applicant's last job(s) and any (technical) college courses taken since high school graduation more informative than the students' high school transcript of a few years ago.

While American labor markets thus do not exactly encourage young people to work hard in secondary school, four-year colleges do. The number of high school graduates that transfers to a (prestigious) four-year college has traditionally been the most distinct benchmark to measure the performance of American high schools. This has made college prep the dominant track in American high schools, and has allowed an underdevelopment of VET programs – particularly, as they are relatively

expensive for the (on average) small school districts. The general American dislike for tracking young people in separate tracks has kept the parents of this 'forgotten half' from demanding such VET programs. And to complete this vicious circle: with few high school students graduating from quality vocational programs, American firms have had little reason to aim their recruiting efforts for their more demanding entry-level positions at high school graduates.

It is, in this context, easy to understand why America's two-year colleges, such as Wisconsin's technical colleges, have been a relative success story (Brint & Karabel, 1991): they offer quality training in a low-skills environment. They do, however, (so far) not supply the large majority of non-college bound youngsters with a smooth school-to-work transition the way the German apprenticeship system does. In Wisconsin, relatively few people enroll in WTCS programs immediately after high school. Only about a third of WTCS FTE enrollments were in vocational programs that train frontline workers (Rogers et al., 1991). Furthermore, the lack of binding national or statewide (skills) standards and assessment procedures does not guarantee a certain minimum quality of VET. And, the dispersion of VET across various independent and decentralized systems that are only weakly linked does not make the available options very transparent for young persons, parents or adult workers. In short, there are problems of too little coordination and cooperation in these areas (Rogers & Streeck, 1991: 11).

It is in this context that American and Wisconsin policy-makers have embarked on ambitious attempts to 'build the middle' (Berryman et al, 1992) in the nineties. They developed reform efforts that generally tried to improve the school-to-work transition for American youngsters through the development of coordinated industry-wide VET systems. Specifically, these efforts have included some polices inspired by Germany. But rather than to strive for a copying of the German market (as some had put forward) the ambition eventually amounted to trying to build partial German-style institutional arrangements - be it national sector skills standards partnerships, local school-to-work partnerships or specific youth apprenticeship programs.

### 6.2.3 The Netherlands

Chapter five analyzed the Dutch case. The Dutch case resembles the German one in that it, too, constitutes a high-skills equilibrium with most youth enrolling in (and many but not all graduating from) multi-year VET tracks. Dutch work organization and firms' recruitment practices have put a premium on substantial initial VET for youth much like in Germany. But while in Germany incentives channel young persons into apprenticeship, the Dutch governance regime offers more ways, both to firms and youth. For one, both firms and young people can opt for work-based and (primarily) school-based tracks offering a full vocational credential. Second, firms and young people both have the alternative of regular low (youth) wage

employment much more readily available to them than their German counterparts – more like is the case in the U.S.. While German low-wage youth employment is predominantly institutionalized as apprenticeship training (and thus includes training rights), there are some Dutch sectors that employ a large share of young people at low wage levels below the adult minimum wage in regular jobs not linked to formal training provision. Both the prominent role of fully qualifying school-based VET and the more prominent role for regular youth employment without training in some sectors help explain the smaller supply of apprenticeship training in the Netherlands as compared to Germany.

When compared to the U.S., of course, Dutch firms still do invest substantially in formal work-based VET themselves: through the supply of apprenticeship positions and through the supply of internship position for those enrolled in (predominantly) school-based VET tracks. Within the Netherlands, the relative importance of dual, more school-based initial tracks and regular youth employment differs significantly between different sectors in the context of similar national legislation. This underlines the importance of sector level variables, including differences in conceptions of control of firms and other relevant actors.

## 6.3 Firms as a coordination mechanism

### 6.3.1 Explaining training investments

Firms' training investments (or lack thereof) themselves were central to the analysis throughout this book. We want to understand if, how and why firms will invest in training. We have analyzed if, how and why firms choose to train youth (or not) within the institutional context of Germany, the American state of Wisconsin, and the Netherlands (cf. sections 3.7.2, 4.4.2 and 5.6.1).

Differences in external incentives certainly go a long way in explaining differences in firm's training investments as rational responses to different external environments. In section 3.7.2, we followed the rest of the literature (e.g. Casey, 1986; 1992; Steedman, 1993; Soskice, 1994) in distinguishing between larger and small firms when explaining why so many German firms choose to train apprentices (also cf. section 6.2.1). For smaller firms, apprenticeship costs are so low as compared to (in)direct benefits, that it is plausible that these firms will already recoup their training costs during the training period, or if only a small number of apprentices stay on for a short while upon graduation. Larger firms can afford to incur significant costs during the training period, because most apprentices will stay on with these larger training firms beyond their graduation (which generates additional benefits) and because not recruiting apprentices means risking a substantial recruitment problem down the road. The lack of equivalent school-based VET tracks next to apprenticeship in Germany helps explain the fact that the (work-based) training

investments of firms for initial VET are relatively higher in Germany as compared to the Netherlands.

If, to an important extent, we can already understand national differences in firms' strategies as logical responses of firms to a different external institutional environment, why not just 'model' the firms as an owner-manager that rationally responds to external incentives, instead of going the more complex route of including the firm not just as an actor, but as a governance mechanism? Why not just leave the rest of what goes on at the firm level a proverbial black box?

A closer look at Soskice's explanatory model already begins to answer that question. Soskice (1994) distinguishes the retention rate of apprentices and the price of training relative to alternatives as two important factors explaining firms' training investments (or lack thereof). Firms will train as long as the costs of apprenticeship training are less than the costs of firm-specific training for external recruits plus the costs of risking recruitment of a 'lemon' (a person hired in the external labor market that turns out to be less than adequate). Through both factors, firms' choices already move beyond a pure response to an external incentive. The retention rate of apprentices is not a completely exogenous factor: while it is dependent upon the choices of the apprentices themselves, the high retention rate of German apprentices is also a consequence of conscious firm strategies. German firms (in particular the larger ones) plan to retain a large share of their apprentices, and this intention is a prominent part of their reason to hire these apprentices.

In addition, an anticipation (based upon past experience) of choices by other actors is an important factor entering into training decisions. Two instances of such anticipations are important in the explanation of the substantial training investments by German firms. The first is the anticipation that most apprentices will continue to stay with the training firm when given the opportunity, as they have in the past. Second, the anticipation that the very large majority of (larger) firms will again hire a subststantial number of apprentices this year to satisfy their own future skilled worker demand - and be able to retain them upon graduation. This enters the training decision equation as a push factor towards training investments: if we do not hire apprentices today, the cream of the crop of this generation will continue to work for our local competitors.

This way, a closer look at the explanatory model for German firms' apprenticeship investments already shows that a somewhat more comprehensive analysis of firms is required to adequately understand their training investments. When one would focus the analysis on understanding the reasons why firms do (or do not) opt to invest in initial work-based VET within one single country, at the very least we have to incorporate the anticipation (based on past experiences) of the behavior of other actors into the analysis.

### 6.3.2 Work organization

When we focus on differences in training investments between firms in different countries, it becomes even more important to include other factors into the explanation. A prime case in point is the case of (adult) apprenticeship in Wisconsin. The institutional regime for that apprenticeship system was explicitly modelled on the German example of the early twentieth century from which, obviously, also the modern German apprenticeship system emerged. But we have seen that both regimes have resulted in very different market outcomes. While modern German apprenticeship constitues an almost perfect monopoly on the school-to-work transition for German youth, its Wisconsin sibling (with the exception of the construction sector) evolved into an elite incumbent worker training system in a minority of sectors.

Even if differences in modern apprenticeship legislation had emerged between the German and Wisconsin apprenticeship governance regimes by the nineteen nineties (cf. Van Lieshout, 1996b), these differences themselves do not appear to be most important factor in explaining the German-Wisconsin differences in training behavior by firms and young people. These legislative differences may very well be the result of a difference in scale: since Wisconsin (adult) apprenticeship failed to achieve a significant market share throughout the economy, it is understandable that its regulations have not been the subject of serious public scrutiny (from the general population, social partners and political parties) and reforms as in Germany, where the law came to govern the large majority of skills training in the large majority.

There are other external institutional differences between Germany and the U.S./ Wisconsin governance regimes to be considered, such as the lack of sector-level collective bargaining in the U.S. outside of unionized construction, and lack of strict constraints on dismissals in the U.S. (cf. sections 4.4.2 & 6.2.2). But these factors are best analyzed as possible remote causes of the resulting international differences. The proverbial elephant in the room, and the readily available proximate cause of international differences in training behavior between German and Wisconsin firms are differences in the organization of work.

The demand for labor and, thus, for particular sets of qualifications, is shaped first and foremost by the organization of work. And with most employment taking place in firms, the firm is the most important single actor shaping this organization. Matched establishment comparisons in various economic sectors show relevant international differences in work organization as well as workforce qualifications and labor productivity, and the links between them (cf. section 2.3.7). Firms shape their training policies on the basis of their work organization - a work organization they have developed within their particular institutional context. And it is this causal chain with which adequate explanations of national differences in firms' training

investments start (cf. sections 3.7, 4.4.2 and 5.6.1).

Parker's historical research on the attempt to create a German-style apprenticeship system in the metalworking sector in the Milwaukee district in the first decades of the 19th century provides us with an exellent example (Parker, 1994; 1996). Parker observed that while these employers were active in organizing apprenticeship over the nineteen twenties, they were at the same time eroding the basis for it by gradually adopting Tayloristic and Fordist production methods that would leave the majority of their workforce in semi-skilled jobs (cf. sections 4.4.2 & 6.2.2). His analysis points us to the credible hypothesis that the core of an explanation for the very different paths of Wisconsin (adult) apprenticeship and German apprenticeship with their similar legislative roots may very well be changing firm strategies towards work organization rather than external institutional differences.

Of course, firms do not develop their work organization in a splendid isolation, and exploring the causes of national differences in work organization will in turn lead us to (possibly institutional) remote causes. If, for instance, firms happen to find themselves in a country where the education system in general (and possibly an apprenticeship system in particular) provides an ample supply of skilled workers, a high-skill strategy is a much more viable option. Firms shape their training policies (and their human resources policies in general) in a particular institutional context in a particular region at a particular point in time. Many of the rules that influence their choices are to an important extent set at a relatively high (national) level. The prominent role of work organization therefore does not diminish the importance of external institutions; in fact, it requires us to consider a broader range of institutions, rather than overstate the importance of individual institutions within the training markets themselves. Given the fact that firms in different countries have different action orientations, they can respond differently to similar institutions in the training market itself. As work organization is an important proximate cause that helps us to understand and explain such differences, it becomes interesting to consider the remote (and possibly institutional) causes of how such differences in work organization have emerged.

From a theoretical standpoint, the important role of work organization as a proximate cause for differences in training policies is one important reason why international comparative research on different skill equilibria and school-to-work transition patterns is well-served by a multilevel approach that includes the firm level as a separate topic for analysis. Firms' work organization is the result of previous choices that will shape their subsequent training choices as a proximate cause. External institutional factors at the sector and national level will previously have influenced their choices in work organization, and will currently interact with the demands and consequences of that work organization to shape current training choices.

With the multilevel nature of this research, firm-level empirical research

was limited next to the analysis of the national and sectors levels. And firm-level research was not devised as to analyze work organization in any detail, let alone the productivity it results in. Indications gathered from our own firm visits in the metalworking sector were pretty much in line with those from matched establishment comparisons in this sector (Mason et al., 1992; Mason & Finegold, 1995; Finegold & Wagner, 1997). We therefore can and will not explore the role of this particular variable in more detail here. A series of matched establishment comparions in a number of sectors in these countries would indeed help us to elaborate our understanding of the interaction between their governance regimes and the resulting skill equilibria.

### 6.3.3 Recruitment

German-Wisconsin differences in the operation of the apprenticeship market lead us to additional evidence for the importance of including firm-level research and analysis into a comparison of markets for intermediate skills. As important as work organization is, it is not the only aspect to consider at the firm level: recruitment policies and practices are another relevant variable to consider. Kerr's concept of 'ports of entry' to firms internal labor markets (cf. section 2.3.5.4) reminded us that not all jobs are effectively open to outsiders. Recruitment is a vital intermediating variable that shapes the operation of labor and training markets, and their social and economic effects.

Prime case-in-point is the very different effect of the (adult) apprenticeship governance regime in Wisconsin in general, and in the metalworking sector in particular, from that of its German counterpart. At first, it was kind of puzzling to come from Germany with an apprenticeship system governing the school-to-work transition to arrive in an American state that a) has an apprenticeship law that does not generate much training and b) was trying to improve its school-to-work transition by (among many other things) building a *separate* youth apprenticeship system. It was, of course, obvious from the low number of apprentices that Wisconsin apprenticeship only played a minor role in the school-to-work transition. During the field work, however, we learned that even a substantial share of apprenticeship does not adress the school-to-work transition! Firm visits and interviews indicated that Wisconsin metalworking apprentices typically had already been working for the firm and were promoted from an entry-level job within that firm to an apprenticeship position. Because the majority of (adult) apprenticeship recruits in Wisconsin metalworking firms are not (high) school graduates but (incumbent) workers, the adult apprenticeship system obviously did not even function as a (direct) school-to-work transition mechanism there.

Theoretically (as well as for public policy purposes), this little fact teaches us two lessons. First, it provides an additional argument to argue our case that firms strategies/internal labor market aspects may significantly alter the operation of an

apprenticeship system and therefore the firm level has to be separateley included in the empirical and theoretical analysis.

Second, we learn that apprenticeship systems do not by definition govern the school-to-work transition. They only do so if and when firms opt to recruit school graduates as apprentices, instead of those who have entered the labor market. Realizing how metalworking apprenticeship started as a new youth training system almost a century ago, and evolved into an elite incumbent worker training system, it seems that school-based education systems may 'drift' from their original goals. In this sector at least, this Wisconsin adult apprenticeship system appears to have experienced a small but relevant 'work experience' or 'age' drift. The drift is understandable given Parker's analysis of the role of changing work organization in those firms by the nineteen thirties. As work organizaton gradually developed to require many semi-skilled jobs and fewer skilled jobs requiring apprenticeship training, mass apprenticeship for all new recruits was no longer required. But, simultaneously, apprenticeship then becomes a possible route for upward mobility for incumbent semi-skilled workers. Both human resources management and a union would soon agree that apprenticeship opportunities should first and foremost be made avaible to incumbent workers. For management, the lack of comparable high school vocational credentials also makes if safer to recruit incumbent workers, whose talent and skills and competencies they have been able to observe themselves for a while, than high school graduates.

The metalworking sector was not the only one to find an indication of the importance of recruiting policies and practices for different training patterns. While teller jobs in both Dutch and German banking were 'career' jobs for those lacking a college education, our (limited) field work on this sector in Wisconsin suggested that tellers there were often recruited from the college student ranks. Instead of a career job, teller was often a 'side' job to help support a college education. The high general education level of the students helps to limit banks' training costs; the downside may have been that the shallower bank-specific skills of tellers may offer one explanation why American banks have not been as successful in capturing the rapidly developing personal financial service market, as Keltner (1995) argued. Keltner's argument in fact was that American banks, because of their work organization and human resources policies, failed to develop the type of professional needed to capture the rapidly developing high-end market for financial advice.

### 6.3.4 Firms' action orientations as a proximate cause

Firms' policies are shaped, but not completely determined, by their current institutional environment. Within that context, firms (and other actors) are obviously free to choose their own policies, to train or not, and to hire whomever

for whichever job description they choose. The institutional context makes some options more attractive than others. Thus, instutitons and regulation matters because the influence costs and benefits of alternative options, and may cause national differences.

But institutions do not direcly determine firms's training choices. They provide an environment to which firms repond - but firms may respond differently to similar environments. Because they do not just face an external environment: their current (work) organization and workforce are as important in shaping their training choices. National differences in firm's internal make-up may therefore be objective causes for the fact that different firms respond differently to similar external incentives. Section 6.3.2 provided us with the example of how differences in work organization seem a key factor responsible for the diverging paths of similar apprenticeship systems in Wisconsin and Germany.

Firms do not constantly meet and weigh the impact and balance the effects of such internal and external incentives, and the costs and benefits they imply for their training strategies. Such strategies are relatively stable; and they are generally the result of any detailed accounting. While firms make conscious decions regarding training, it was instructive to note that firms in neither country tended to make cost-benefit calculations of training and alternative options. For Germany, this is what von Bardeleben et al. (1994a; 1994b; 1995) learned when they embarked upon empirical research to determine such costs and benefits. In addition, von Bardeleben et al. and others that have made such cost-benefit analyses have had to include an important category of so-called indirect training benefits such as lower recruitment and selection costs, lower risk of wrong recruitment decisions and a positive image for training firms (cf. section 3.7.2). These costs are needed to explain why it may be rational for larger firms to invest in training beyond the direct benefits they will receive from such investments. But even in such research, these indirect categories are only roughly estimated. The point is that (German) training firms apparently think such indirect benefits exist, and that the balance of their training investments is positive for their firms, without having actually made detailed cost-benefit analyses of their substantial training investments themselves. Training decisions are generally not to the outcome of a detailed and exact analysis, but rather reflect a more qualitative strategic decision.

Theoretically, the notion of an action orientation of firms towards training fits in with well with this empirical evidence. Both external and internal institutions will have shaped firms' action orientations regarding training. And, rather than to make any detailed analysis of if how and why particular internal or external changes would have to lead a change in training policies, firms respond to such changes from these action orientations. Given the fact that such action orientations can differ substantially between countries (and sectors), a similar change in an external environment will illicit different responses from firms with different action orientations.

The best example is offered by firms' reactions to the possibility of more state intervention with VET in Germany than in the Netherlands. When, in the days of Dutch Secretary of Education Ritzen, firms feared that the government might use its dualization proposals as a pre-text to scale back public VET investments (a claim that, to be sure, has always been strongly claimed to be unfounded by that government), preventing that became an important goal of employers' associations (and unions) in reform debates and covenants that were concluded. In the German case, firms and their associations react as strongly to a possible change in state intervention – but, contrary to their Dutch counterparts, they are up in arms when the state threatens to intervene *more* in funding issues (i.e. by imposing a levy system). German firms share an action orientation where they believe that there is no satisfactory functional equivalent to firm-based training under a regime governed (to an important extent) by their own associations. They will even counteract their short-term self-interest (by hiring additional apprentices they will not need themselves) to preserve that system. While some Dutch and Wisconsin firms may feel as strongly about their own apprenticeship system, the majority of firms in those countries do not have that conviction. They consider school-based training a satisfactory functional equivalent.

### 6.3.5 Conclusions

Firms are more than just actors that respond to incentives posed by external institutions. Apprenticeship training, by its very nature, is a conscious choice to not rely on recruitment in the external labor market. Apprenticeship training implies that the firm choses to start a long-term relation with a (future) worker who does not yet command all the skills needed for the job he is projected to fulfill a few years down the line, and to systematically train him to acquire those skills in the near future. Apprenticeship training, in this sense, is a perfect example of how a firm can act as an alternative coordination mechanism to an (external) market. The choice to train (and how) is influenced by external incentives (e.g. apprenticeship legislation), by expected behavior by other actors (e.g. other firms), and by internal aspects of the firm itself (e.g. work organization). We have seen that even apprenticeship training, based on similar legislative roots, can take quite different forms in different countries – and in different sectors, as we will further elaborate in the next section.

## 6.4 The role of associational governance

Besides firms, the other governance mechanism we specifially included in our theoretical approach was assocations. Streeck et al. (1987) had already pointed out the important roles German employers' associations and unions have in

the governance of German apprenticeship in terms of regulation, financing, implementation and supervision and control. Both the German and Dutch high-skills equilibrium come with important governing roles for these assocations. In Germany, the strong role of associations in apprenticeship governance was cemented in the 1969 Vocational Training Act. In the Netherlands, the formal role for Dutch employers' associations in VET governance has been steadily enlarged since the nineteen eighties, both at the sector and the national level. The governing roles they already had with the old Dutch apprenticeship system were expanded to roles regarding school-based vocational training, and these new roles were cemented in the new 1996 Act. The American low-skills equilibrium generally lacks governing roles for associations. Even apprenticeship governance in Wisconsin is generally a case of the state monitoring individual firms, rather than an example of associational governance.

But the one exception we find in Wisconsin is, therefore, particularly intriguing. In unionized construction, apprenticeship forms a German-like monopoly on training for young persons. And in this sector, employers' associations and unions do play important governing roles in the apprenticeship system. Joint apprenticeship committees are the sponsor of apprenticeship programs, and they place the apprentices with individual firms. The funding comes from a levy on union workers' wages. This example shows that even in the U.S., it is indeed possible to create a flourishing apprenticeship system through sector-level and regional supports. In addition, we found a non-union employers' association creating its own apprenticeship system for the non-union construction sector. Associational governance for apprenticeship does, thus, not always include union involvement.

Important as associations are for an analysis of training governance regimes, one should be careful not to overstate their case. Katz & Ziderman (1990), for instance, hypothesize that German chambers of commerce (which basically are employer's associations that also perform some public tasks) strongly and effectively discourage competition for skilled workers among firms. While there is certainly some peer pressure under German employers to each train their own apprentices, this appears to be a vast exaggeration of the extent to which this actually happens. German firms train apprentices, first and foremost, because they perceive it to be in their individual interest. Peers may play an additional role in shaping that opinion: the mental barrier to stop training is certainly higher if you would be the only one in your regional association to not train your own apprentices. But German firms are not coerced into training because by their assocations. In fact, it is because German firms want to train themselves that they have asked their associations to govern and uphold the system.

Overstating the role of peer pressure through employers' associations in Germany also neglects the important role that conscious *union* strategies have played in shaping a governance regime for the German market for intermediate

skills that supports a high-skills equilibrium. German unions have always pressed for an apprenticeship system that guarantees high quality training for all (future) workers. They try to strengthen their power by maximizing the homogeneity of the workforce they represent, which explains their interest in keeping the level of both horizontal and vertical external differentiation in apprenticeship low (cf. section 3.5.2.4; Streeck et al, 1987; Reuling, 1998). And they are willing to make apprenticeship training affordable by allowing firms to negotiate low apprenticeship wages with them for their (future) members. The broadness of those German industrial unions in combination with their conviction that a more homogenous workforce strengthens their bargaining power has led them to champion significant reorganizations of a large number of separate training occupations over time into lesser occupations with more overlap in their basic training content[2].

American unions in fact have an additional incentive to pursue high-skill training policies: as their members' firms compete with non-union firms that can charge lower prices to the extent that they pay lower wages, the union sector's claim to offer higher quality craftsmen is vital to their local competitive position. The resemblance between German industrial unions and these craft unions lies in the vigor with which they strive to maintain apprenticeship as the general port of entry into their occupation – although in both instances, employers and their associations generally seem to agree with that goal.

Another observation is relevant here. While associations play important roles in the governance of German apprenticeship, there is one important role they do generally not fulfill. In many apprenticeship systems an important part of the training costs is covered through training funds that are created in sector level collective bargaining agreements. In our three countries in this study, such funds exist for apprenticeship in Wisconsin construction and in many Dutch sectors. With the exception of the construction sector, however, such funds are conspicuously lacking in Germany. While such funds are considered important institutional supports for apprenticeship systems, the world's most famous apprenticeship system apparently can do without.

Having cautioned against overstating the importance of associations, the conclusion remains that associational governance plays an important role in successful markets for intermediate skills, particularly those where work-based learning plays a key role. Collective bargaining can help to keep training affordable by defining low training wages as compared to (semi-)skilled wages. The other side to that coin is to give the trainees rights, e.g. by guaranteeing training quality up front (through binding skill standards), and by institutionalizing entitlements to reward training completion (e.g. high skilled worker wages). And, thirdly, employers' associations can indeed function as a stabilizing factor in maintaining the consensus in a particular regional and sectoral business community that it is in their members' long-term interest to continue their training investments. The example of apprenticeship

in unionized construction in Wisconsin shows that associational governance can effectively support an apprenticeship system in a national environment where that system normally flounders. It is, therefore, understandable that countries trying to stimulate work-based learning have attempted to strenghten the potential for associational governance. Examples in our cases were the expansion of associational governance into Dutch school-based VET (chapter 3), American subsidies for national partnerships to develop skills standards (cf. section 4.5.3.3 & 4.5.3.4) and for local school-to-work partnerships (cf. section 4.6.2.3), as well as the emergence of a Wisconsin Regional Training Partnership (4.6.4).

## 6.5 Market mechanisms

The importance of firms and associations as alternative governance mechanisms does not negate the operation of market mechanisms. But the role (or lack thereof) of these other governance mechanisms does shape how and why market mechanisms operate within in particular country. And, in fact, such alternative governance mechanisms may help market mechanisms to function adequately.

Empirical markets for intermediate skills themselves are not adequately modeled as one single market with a simple, uniform product (skilled labor) supplied by one uniform type of producer (schools) and demanded by one uniform type of consumer (firms)[3]. Skill acquisition takes place over more years over an individual worker's career. Some of it will take place in (public or private) schools; a lot of it will take place through formal or informal learning on various jobs (that may be closely related or differ distinctly in their contents); and some of it occurs in other spheres of life[4]. Because of the importance of firms as both producers and consumers of skilled labor, supply and demand side of markets for intermediate skills cannot be distinguished as neatly as in (most) commodity markets.

In fact, modeling markets for intermediate skills as one single market would underestimate the importance of market mechanisms: market mechanisms play an important role at *several* points in time across a school-to-work transition. We at least have to distinguish between a market where students (or young workers) choose between VET (and academic) options, and a market where VET graduates search for jobs they have been training for (cf. sections 2.3.6 and 6.4.1). These two markets are linked through the VET tracks if and when progress through tracks – but they nevertheless remain different markets that citizens enter at different points in time.

If and when the training occurs in firms, in analytical terms this is where they choose for 'hierarchy' as a coordination mechanism in house, rather than to purchase skilled labor on the external market. Even then, however, this does not mean that the external market does not play a role. Quite to the contrary: the fact that firms commit to apprentices for a while results in a focused matching process.

Take the metalworking sector in the German state of Baden-Württemberg for an example. The large majority of metalworking firms train their own apprentices to an extent that typically matches their future (skilled) labor market demand. Since they invest heavily in this training, they have a vested interest in recouping their investments by retaining most graduated apprentices as regular skilled workers upon their graduation (cf. section 3.7.2). Thus, they tend to be careful and thorough in their apprentice recruitment. For the young people, the apprenticeship monopoly implies that interesting career openings tend to arise as an apprenticeship. When successfully progressing through that apprenticeship training, chances are that a suitable vacancy will be available for the apprentice upon graduation – and when the apprentices has done well, he will get the job. But this simultaneously implies that that vacancy will never be open to anyone looking for employment from outside that firm. Thus, young people have a vested interest in acquiring an apprenticeship position. And, since their school record will be an important part of the evaluation process, in working hard at school.

The interesting thing here is that the result is what Soskice (1994) has labelled a rank-order tournament. Not each apprenticeship position is equally attractive, and school-leavers rank apprenticeship across sectors, firms, and individual firms for a particular training occupation. The interesting thing is that German apprenticeship shares this aspect with the most famous system of higher education: the American market for higher education. Despite the formal equality of American college diploma's and German appenticeship graduation, informal differences in status of those colleges and training firms results in active competition between American youngsters for access to the best colleges, and between German youngsters for access to the best internal labor markets through an apprenticeship position. We discussed how apprenticeship regulation in fact helps to organize this market in section 3.8.2. When comparing the German apprenticeship market to the American market for intermediate skills, the difference is certainly between an organized and an unorganized market. And the organized market seems to bring out the best behavior of both firms and young people.

The German apprenticeship system is conducive to the operation of the labor market, too. The reliable credentials provided by apprenticeship provide a solid basis for external mobility for skilled workers. The fact that inter-firm mobility under apprenticeship graduates is not very high is not a reflection of the impossibility of mobility, but a reflection of the fact that most firms alreay have trained their own and are happy with the results. The overlapping of occupational and internal labor markets (cf. section 3.8.3) seems to combine the best of both worlds for young workers.

## 6.6 States and their different playing fields

International differences in the role of firms and associations as governance mechanisms in markets for intermediate skills implies that states play different fields when governing VET markets. The fact that German firms continue to train apprentices, and will oppose attempts at increased state intervention in the training market, makes the governing task for the German state distinct from its Dutch counterpart, let alone its American one. American states faced a situation where young people enroll in high schools focussed on college preparation, and without an apprenticeship system of any quantitative significance. The German state faced a situation where they can effectively coerce firms to up their apprenticeship training efforts above their immediate individual need by threatening to take over the responsibility for and provision of VET from the social partners.

We saw how similar attempts at apprenticeship legislation may still lead to quite divergent results, due to differences in work organization. We also saw that in a country where the apprenticeship volume overall is almost negligible, sector-level governance may still make it very relevant in a particular sector, as we saw in unionized construction in Wisconsin. For states, governing the market for intermediate skills is thus more complicated than 'just' setting the legal incentives right. Legal incentives may still achieve different results in different countries. And, vice versa, different countries may benefit from different legislation. Just as we cautioned against overstating the importance of associational governance, we have to caution against overstating the autonomous power of the state in governing VET.

With that caveat, there are still things states can learn from a careful analysis of how various markets of intermediate skills operate. For instance, there are basically three important aspects that help explain the Dutch and German[5] school-to-work transitions, as well as the apparent attractiveness of organized VET to young people:

- firms do actively recruit young people;
- firms actively screen young people and include close scrutiny of their school performance as an important indicator;
- young persons are actively helped at the local level with their school-to-work transition – although the Netherlands has been much weaker here than Germany (cf. section 5.6.2).

While states cannot directly influence the first two aspects, they can at least try to stimulate this type of behavior by firms. For instance, they can try to build a reliable skills standards system to make it easier to screen young people's credentials, and easier screening may stimulate recruitment. They can directly try to help youth with their school-to-work transition at the local level.

One important consequence of the importance of other governance mechanisms such as the firm and associations is that labor market governance is at least as

important as educational/VET governance in the narrow sense markets. This is a lesson relevant for both academic analysts as well as policymakers. VET governance in general, and work-based VET governance in particular, is a way to potentially help shape internal labor markets into potentially occupational labor markets, and thus ensure that there are organized training opportunities available that can effectively serve as ports of entry into firm's internal labor markets for young people. This insight can also help generate additional possible policy options. To give one example: when the Netherlands tried to stimulate work-based learning, the debate focused on increasing the work-based component of school-based tracks. But the Dutch state could have tried to stimulate apprenticeship beyond its boundaries at the time had it aimed by focusing not on school-based tracks, but on low-wage regular youth employment as a source for that growth. By allowing low-wage youth employment without guaranteed training rights (such as included in apprenticeship contracts) a considerable share of Dutch youth employment takes that form, rather than the form of an apprenticeship as is the case in Germany. Limiting low youth wages to apprenticeship could thus result in a growth of Dutch apprenticeship.

Institutionalizing (VET) schools and their operation is obviously another major part of the role of the state – and one that it does fulfill quite autonomously, in the end. We ended up discussing the role of schools less extensively than we originally anticipated when we started this project. School interviews were an important part of the research, and crucial to our understanding of the different VET systems. The reason why schools have been given relatively less attention is because they play a different role in each in of the countries that is to an important extent a consequence of the role of formal firm-based (apprenticeship) training.

In Germany, VET schools are distinctly a junior partner to assist the firm with the training of its apprentices. An important junior partner, which deserves and receives a lot of respect – but a junior partner nonetheless. Given the fact that apprenticeship is the centre around which the various types of full-time VET are organized, related instruction for apprenticeship is central in their policies.

The role of Wisconsin's technical colleges is different. They are the dominant supplier of organized VET in their region. Only for a limited number of occupations and a limited number of apprentices does that supply consist of related instruction. School-based VET is the core business of these colleges, with many students employed and following specific courses next to their job, rather than multi-year programs. In addition, since the initiative to develop new pathways or programs does not reside with (employers') associations and unions as in Germany, they have an entrepreneurial role in organizing the VET supply for their region.

The Dutch ROCs developed through a series of mergers between various small schools with sometimes quite different identities. These differences stemmed from the type of tracks the different establishments offered (related instruction,

or adult education, or MBO) and the economic sector they offered VET for. The resulting large ROCs more closely resemble the Wisconsin Technical Colleges, which should not surprise us as American two-year colleges served as the example on which the Dutch ROC formation was explicitly based (cf. Van Lieshout, 1996c: 5). As compared to the German VET schools, the primary difference is that overall, school-based training makes up a larger part of Dutch VET supply than work-based training. Dutch ROCs are better described as the senior training partner, with firms as junior partners providing internships – and the work-based component of apprenticeship. Nevertheless, there are at least two crucial differences with their American/Wisconsin counterparts. First, while the schools may be senior training partner in the Netherlands, and while state policies have intended to increase their autonomy – the supply of VET is consciously limited to particular tracks, for which binding sets of skills standards are developed by the LOBs/KBBs in which they have to cooperate with the social partners. This by definition limits them in their entrepreneurship relative to their American counterparts. In addition, the role of the Dutch state (i.e. the Department of Education) provides for a permanently different playing field from the WTCS, where under the supervision of an independent board the association of colleges themselves governs their sector.

The different roles of schools within the three national VET systems are an indication of broader differences in markets for intermediate skills. Closer scrutiny in an historical analysis might, however, reveal that previous choices in the institutionalization of schools may have helped these markets to develop in their distinct fashions the way they did.

## 6.7 Conclusion: different hands

Governance regimes for VET consist of much more than states and their VET legislation and related policies. At the very least, an effective analysis of VET governance regimes considers at least four potentially equivalent coordinating mechanisms: market mechanisms, hierarchies, states, and associational governance.

For states, the consequence of their lack of autonomy in unilaterally defining an effective governance regime translates into the notion that there is not *one* identical invisible hand that governs VET markets in a similar fashion in each and every region and sector. There are 'different hands' that govern, as the title of this book suggests. The hand that governs actual markets for intermediate skills is a specific combination of the four aforementioned governance mechanisms. Similar state policies can lead to distinctly different results because of differences in the role of the other governance mechanisms, and vice versa.

This is one important reason why we have not used single governance mechanisms as labels to identify the associational governance regimes we analyzed in this book. Tempting as it may appear to label the German apprenticeship governance regime

as associational because associational governance does play a pronounced role in it, it runs the risk of being misinterpreted to imply that the other governance mechanisms are less important. But as we have analyzed, the role of firms as a governance mechanism is probably even more crucial to understand that German regime. And the distinct roles of firms and associational governance as governance mechanisms do not eliminate the role of market mechanisms, but may strengthen them, since the result is a highly competitive rank-order tournament for the best apprenticeship positions and the best apprentices.

Alternatively, one might be tempted to label the Dutch regime as a school-based regime. While the regime is certainly more school-based than its German counterpart, work-based learning and therefore the firm as a governance mechanism play a major role for a significant minority of Dutch VET tracks, and a significant minor role in the form of internship in the majority of tracks. Associational governance in the Netherlands also plays a prominent role, and the fact that the scope of associational skills standards systems has been expanded to cover (primarily) school-based track is an interesting innovation. The exact operation of the market mechanism, however, is somewhat less transparent than in Germany. This is a logical consequence of the fact that predominantly school-based tracks (which implies applying to schools) and work-based tracks (which means applying to a training firm) co-exist. A detailed analysis of how the exact matching process from students to tracks/apprenticeship openings proceeds, and how proactive firms are consciously opting for more school-based over work-based tracks or vice versa, would be interesting here.

Both Germany and the Netherlands have governance regimes where the four coordination mechanism all play an important role; the difference is in the particular mix of those governance regimes, and their interaction.

With the U.S., one of the four governance mechanisms, associational governance, is less developed than in Germany or the Netherlands. Even adult and youth apprenticeship do not involve employer's associations and unions as prominently, with the notable exception of the construction sector. With the underdevelopment of VET in high schools, the American regime is firm-based as in Germany; the crucial difference is that of an unorganized and an organized labor market. But, in effect, the key part of that difference is that German youth will enter into a multi-year contract with a single firm that is accompanied by a formal training plan. American youth that do not go to higher education will typically have had two or three subsequent semi-skilled jobs over a similar period, with some informal training, and possibly a course or two at a two-year college. Therefore, one can hardly label the American regime as 'hierarchical', since German firms typically play a more substantial role for a longer period in training individual young persons.

National states, then, do not have a serious other option then to go their own way in developing their market for intermediate skills. International comparisons can help to identify alternative ways on how such markets can work, and inspire

ideas for reform at home. The idea to straightforwardly copy one or the other aspect of another countries' governance regime, however, will seldom lead to similar results[6]. Rather than straightforward copying of such institutional arrangements, international comparative work can result in new questions that can shed a new light on the strengths, weaknesses and peculiarities of one's own market for intermediate skills.

**Notes chapter 6**

1 Cf. Van Lieshout (1996b) for an extensive comparison of the German and Wisconsin apprenticeship regimes.
2 Of course, unions were certainly not the only advocates for a general change in this direction, as both employers' associations themselves and independent research from the BIBB pointed in a similar direction. But employers' associations in this process may have to deal with factions among their constituency wanting to preserve a particular training occupation (cf. section 3.5.2.4).
3 For an extensive argmentation: compare Van Lieshout (1999). It points out the shortcomings of an attempt to analyze the Dutch market for intermediate skills as such.
4 These days, most young persons will predominantly pick up basic computer skills while entertaining themselves at home.
5 And, for that matter, the Japanese. Cf. Van Lieshout, 1997a: 45.
6 The same goes for other markets and policy fields, as well.

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**Abbreviations**

| Abbreviation | Full Name in Native Language | English Description |
|---|---|---|
| AHA | American Bankers Association | Ibid. (US) |
| ABC | Associated Builders and Contractors | Ibid. (US) |
| ACOA | Adviescommissie Onderwijs-Arbeidsmarkt | Advisory Committee Education - Labor Market (NL) |
| ACT | American College Test | Ibid. (US) |
| AFL | American Federation of Labor | Ibid. (US) |
| AFL-CIO | American Federation of Labor-Congress of Industrial Organizations | Ibid. (US) |
| AGC | Associated General Contractors | Ibid. (US) |
| AIB | American Institute of Banking | Ibid. (US) |
| AVBB | Algemeen Verbond Bouwbedrijf | General Association of Construction Firms (NL) |
| AVV Act | Wet op het algemeen verbindend en onverbindend verklaren van bepalingen van collectieve arbeidsovereenkomsten | Collective Bargaining Agreement Extension Act (NL) |
| BA | Berufsakademien | Vocational academies (G) |
| BAS | Berufsfachschulen | Vocational program schools (G) |
| BAS | Wisconsin Bureau of Apprenticeship Standards | Ibid. (WI) |
| BAT | Federal Bureau of Apprenticeship and Training | Ibid. (US) |
| BBiG | Berufsbildungsgesetz | Vocational (apprenticeship) training act (G) |
| BBL | Beroepsbegeleidende leerweg | Apprenticeship training pathway (NL) |
| BFS | Berufsfachschulen | Variety of initial full-time school-based Vet (G) |
| BIBB | Bundesinstitut für Berufsbildung | Federal Institute for Vocational Training (G) |
| BLK | Bund-Länder Kommission für Bildungsplanung und Forschungsförderung | Federation-States Committee for Educational Planning and Research Stimulation (G) |
| BMBW | Bundesministerium für Bildung und Wissenschaft | Federal Department for Education and Science (G) |
| BOL | Beroepsopleidende leerweg | Vocational training pathway (NL) |
| BOOB | Bedrijfstakgewijs Overleg Onderwijs Bedrijfsleven | Sector Consultation Education Trade and Industry (NL; merged with LOL into LOBs/KBBs) |
| BOTO | Bedrijfstakgewijs Overleg Technisch Onderwijs | Sector Consultation Technical Education (NL; merged with LOL into LOBs/KBBs) |
| BS | Berufsschule | School for related instruction for apprentices (G) |
| BVE | Beroepsonderwijs en volwasseneneducatie | Vocational and adult education (NL) |
| Bve raad | Beroepsonderwijs en Volwasseneneducatie raad | Association of VET colleges (NL) |
| BVJ | Berufsvorbereitungsjahr | Preparatory vocational training year (G) |
| BVL | Bijdrageregeling Vakopleiding Leerlingwezen | Subsidy Apprenticeship Training (NL) |
| CAO | Collectieve Arbeidsovereenkomst | Collective bargaining agreement (NL) |
| CAO Act | Wet op de collectieve arbeidsovereenkomst | Collective Bargaining Agreements Act (NL) |
| CERI | Centre for Educational Research and Innovation | Ibid. |
| CEW | Center on Education and Work | Ibid. (WI) |
| CIO | Congress of Industrial Organizations | Ibid. (US) |
| CNV | Christelijk-Nationaal Vakverbond | Christian-National Union Confederation (NL) |
| Colo | Vereniging van kennisverenta beroepsonderwijs bedrijfsleven | Association of knowledge centers vocational education trade and industry (NL) |
| COWS | Center on Wisconsin Strategy | Ibid. (WI) |
| CPB | Centraal Planbureau | Netherlands Bureau for Economic Policy Analysis (NL) |

| | | |
|---|---|---|
| CREBO | Central register beroepsopleidingen | Central Register of Vocational Courses (CREBO) |
| DGB | Deutscher Gewerkschaftsbund | (Largest) German union confederation (G |
| DILHR | Wisconsin Department of Industry, Labor and Human Relations | Ibid. (WI) |
| DOE | Federal Department of Education | Ibid. (US) |
| DOL | Federal Department of Labor | Ibid (US) |
| DPI | Wisconsin Department of Public Instruction | Ibid. (WI) |
| EAB | Educational Approval Board | Ibid. (WI) |
| EZ | Ministerie van Economische Zaken | Department of Economic Affairs (NL) |
| FHS | Fachhochschulen | Higher vocational education colleges (G) |
| FME | Vereniging voor de Metaal- en Elektrotechnische Industrie | Federation for the Metalworking and Electrotechnical Industry (NL) |
| FNV | Federatie Nederlandse Vakbeweging | Confederation of Dutch Trade Unions (NL) |
| FOS | Fachoberschulen | Vocational upper schools (G) |
| FS | Fachschulen | Variety of continuing school-based VET for trained apprentices with relevant work experience (G) |
| GDP | Gross Domestic Product | Ibid. |
| GED | General Equivalency Diploma | Ibid. (US) |
| GOA | Gemeenschappelijke opleidingsactiviteiten | joint training activities (NL: regional sector apprenticeship training partnerships) |
| HAVO | Hoger Algemeen Voortgezet Onderwijs | Senior general secondary education (NL) |
| HBO | Hoger BeroepsOnderwijs | Higher professional education (NL) |
| HSI | Hugo Sinzheimer Instituut | Ibid. (NL) |
| IG | Industriegewerkschaft | Industrial union (G) |
| IIRI | Industrial Relations Research Institute | Ibid. (WI) |
| ISCED | International Standard Classification for Education | International standard classification for education |
| IAMAW | International Association of Machinists and Aerospace Workers | Ibid. (US) |
| JAC | Joint Apprenticeship Committee | Ibid. (US) |
| KBB | Kenniscentra beroepsonderwijs bedrijfsleven | Knowledge centres vocational education trade and industry (NL; previously LOB) |
| KDW | Kuratorium der deutschen Wirtschaft für Berufsausbildung | Joint Committee of German Business for Vocational Training (G) |
| KMBO | Kort Middelbaar Beroepsonderwijs | Short (school-based) upper secondary vocational education (NL) |
| KMK | Ständige Konferenz der Kultusminister der Länder in der Bundesrepublik Deutschland | Standing Conference of the Ministers of Education and Cultural Affairs of the States in the Federal Republic of Germany (G) |
| LBO | Lager Beroepsonderwijs | Junior secondary vocational education (NL: currently integrated in VMBO) |
| LOB | Landelijk Orgaan Beroepsonderwijs | National Body for Vocational Education (NL) |
| MAVO | Middelbaar Algemeen Voortgezet Onderwijs | Junior general secondary education (NL) |
| MBO | 'Middelbaar BeroepsOnderwijs' | Intermediate (upper secondary) vocational education (NL) |
| MEC | material establishment comparison | Ibid. |
| MKB Nederland | Midden- en Kleinbedrijf Nederland | Association of middle-sized and small firms Netherlands (NL) |
| MKS | Ministerium für Kultus und Sport Baden-Württemberg | Department of Culture and Sport of the state Baden-Württemberg (G) |
| NCEE | National Center on Education and the Economy | Ibid. (US) |
| NCES | National Center for Education Statistics | Ibid. (US) |
| NCW | Nederlands Christelijk Werkgeversverbond | Dutch Christian Employer Association (NL) |
| NIESR | National Institute for Economic and Social Research (NIESR) | Ibid. |

| | | |
|---|---|---|
| NSSB | National Skill Standards Board | Ibid. (US) |
| NTMA | National Tooling and Machining Association | Ibid. (US) |
| OCW | Ministerie van Onderwijs, Cultuur en Wetenschappen' | Department of Education, Culture and Science (NL) |
| OECD | Organization for Economic Cooperation and Development | Ibid. |
| OW | Ministerie van Onderwijs, en Wetenschappen' | Department of Education, and Science (NL; later OCW) |
| POP | Persoonlijk ontwikkelingsplan | Personal development plan (NL) |
| SER | Sociaal-Economische Raad | Socio-Economic Council (NL) |
| STAR | Stichting van de Arbeid | Labor Foundation (STAR) |
| SVM | Sectorvorming en vernieuwing MBO | Sector formation and innovation MBO (NL) |
| RCO | Raad van Centrale Ondernemingsorganisaties | Council of Central Employers' Associations (NL) |
| ROC | Regional Opleidingscentrum | Regional education center (NL; providing senior secondary VET) |
| SAT | Scholastic Aptitude Test | Ibid. (US) |
| SCANS | Secretary's Commission on Achieving Necessary Skills | Ibid. (US) |
| SZW | Ministerie van Sociale Zaken en Werkgelegenheid | Department of Social Affairs and Employment (NL) |
| TLM | Transitional Labor Market | Ibid. |
| UAW | United Auto Workers | Ibid. (US) |
| ÜBS | überbetriebliche Ausbildungsstätten | Regional apprenticeship training centres (G) |
| UE | United Electrical workers | Ibid. (US) |
| UPIU | United Paperworkers International Union | Ibid. (US) |
| USWA | United Steel Workers Association | Ibid. (US) |
| UW | University of Wisconsin system | Ibid. (WI) |
| VAVO | Voortgezet Algemeen Volwassenenonderwijs | General Adult Secondary Education (NL) |
| VBO | Voorbereidend Beroepsonderwijs | Pre-vocational education (NL) |
| VET | Vocational education and training | Ibid. |
| VHP | Vereniging van Hoger Personeel | Union of White Collar and Senior Staff Associations (NL) |
| VMBO | Voorbereidend Middelbaar Beroepsonderwijs | Pre-vocational secondary education (NL) |
| VNO | Verbond van Nederlandse Ondernemingen | Association of Dutch Enterprises |
| VNO-NCW | Vereniging Verbond van Nederlandse Ondernemingen – Nederlands Christelijk Werkgeversverbond | Association of Associations of Dutch Enterprises - Dutch Christian Employer Association (NL) |
| VOTEC | Vocational and Technical Education and Training | OECD Research Program |
| VWO | 'Voorbereidend Wetenschappelijk Onderwijs' | Pre-university education (NL) |
| WEB | Wet Educatie en Beroepsonderwijs | Adult and vocational Education Act (NL) |
| WLRB | Wisconsin Legislative Reference Bureau | Ibid. (WI) |
| WMM | Wet Minimumloon en Minimumvakantiebijslag | Act minimum wage and minimum holiday pay (NL) |
| WRR | Wetenschappelijke Raad voor het Regeringsbeleid | Scientific Council on Government Policy (NL) |
| WRTP | Wisconsin Regional Training Partnership | Ibid. (WI) |
| WTCS | Wisconsin Technical College System | Ibid. (WI) |

## Nederlandse samenvatting

### 1 Introductie: onderzoeksvragen en opzet

Onze ambitie was te analyseren en vergelijken hoe empirische markten voor middelbare kwalificaties opereren onder verschillende reguleringsregimes. We verwachtten dat zulke reguleringsregimes zouden bestaan uit een combinatie van verschillende reguleringsmechanismen die elkaar, en de keuzes die actoren maken, beïnvloeden. De vraag voor de nationale casus studies en hun vergelijking in de hoofdstukken drie tot en met vijf was: hoe opereren markten voor middelbare kwalificaties in elk van deze drie landen? Elk hoofdstuk adresseerde voor een land de volgende vragen :

- Welke opties zijn er voor beroepsonderwijs en scholing?
- Welke regels en actoren reguleren deze opties?
- Hoe helpt de interactie van deze regels en actoren de feitelijke keuzes van jonge mensen en werkgevers in relatie tot beroepsonderwijs en scholing te verklaren?

De institutionele orde, strategieën van actoren, en hun interactie werden geanalyseerd in markten voor middelbare kwalificaties in (West-)Duitsland (hoofdstuk 3), de Amerikaanse staat Wisconsin (hoofdstuk 4) en Nederland (hoofdstuk 5). De bestaande opties voor beroepsonderwijs en scholing en de regels en actoren die hen reguleerden werden beschreven en geanalyseerd, resulterend in een analyse van hoe de interactie tussen die regels en actoren de empirisch geobserveerde keuzes van jonge mensen en bedrijven in die landen helpt te verklaren. Elke landenhoofdstuk beschreef en analyseerde de nationale casus tegen de achtergrond van de casussen uit eerdere hoofdstukken, zodat de drie markten gaandeweg werden vergeleken.

### 2 Een actor-gecentreerde institutionalistische benadering van markten voor middelbare kwalificaties

Het kernargument in dit boek luidt dat empirische markten voor middelbare kwalificaties inderdaad worden gereguleerd door meerdere, interacterende reguleringsmechanismen, die gezamenlijk een bepaald reguleringsregime constitueren. Verschillende reguleringsregimes resulteren in verschillende strategieën die beschikbaar zijn voor actoren, en/of in verschillende te verwachten opbrengsten voor vergelijkbare strategieën. In dit opzicht kunnen instituties verschillend gedrag van vergelijkbare actoren in verschillende markten helpen te verklaren. Tegelijkertijd zijn actoren in scholingsmarkten niet slechts passieve respondenten die reageren op prikkels, zoals die worden gesteld door externe regels. Actoren hebben hun eigen actie oriëntatie, hun eigen conceptie van controle,

op hoe ze effectief kunnen opereren in hun omgeving om de gekwalificeerde beroepsbevolking te verwerven die ze nodig hebben. Zo'n conceptie van controle is tegelijkertijd een visie op de wereld die actoren in staat stelt de acties van anderen te interpreteren, en een reflectie van hoe de markt is gestructureerd (paragraaf 2.3.6.3). Dergelijke concepties van controle worden beïnvloed door vroegere en actuele institutionele aspecten van de omgeving van de actoren (bijvoorbeeld het arbeidsverhoudingenstelsel waarin ze opereren) en de prikkels die die omgeving impliceert in termen van de verwachte opbrengsten van bepaalde strategieën. Maar concepties van controle zijn ook afhankelijk: actie oriëntaties van sommige actoren zullen op hun beurt die van anderen helpen beïnvloeden. De typische kwalificatiestrategieën van bedrijven in een bepaalde bedrijfstak in een bepaalde regio zullen bijvoorbeeld resulteren in bepaalde typen vacatures en scholingsopties die beschikbaar zijn. De historische beschikbaarheid van dergelijke opties zal op zijn beurt de actie oriëntatie van (toekomstige) werknemers beïnvloeden voor wat betreft hun eigen strategische keuzes. Verschillende actie oriëntaties van vergelijkbare actoren zullen resulteren in verschillende reacties op bepaalde regels of hervormingen, en daarom helpen ze de relatieve stabiliteit van belangrijke verschillen tussen verschillende markten te verklaren. Reguleringsregimes moeten daarom niet exclusief worden geïnterpreteerd alsof er pure en perfecte stimulus-respons relaties zouden bestaan tussen externe regels (instituties), de prikkels die ze impliceren, en de resulterende strategieën van actoren. Het vergelijken van markten voor middelbare kwalificaties in onze drie landen vereist het delicate balanceren van de quasi-objectieve prikkels die de institutionele omgeving stelt, met de eigen strategieën van actoren in markten voor middelbare kwalificaties.

## 3 De Duitse markt voor middelbare kwalificaties

Hoofdstuk 3 analyseerde het hoge kwalificatie-evenwicht dat wordt geschraagd door het Duitse leerlingstelsel en andere instituties. De Duitse markt voor middelbare kwalificaties heeft voortdurend internationale aandacht gegenereerd omdat het een van de weinige is waar bedrijfsinvesteringen in formeel beroepsonderwijs en scholing verantwoordelijkheid zijn voor de meerderheid van de investeringen in beroepsonderwijs en scholing. In paragraaf 3.7.2 volgen we de rest van de literatuur (o.a. Casey, 1986; 1992; Steedman; 1993; Soskice, 1994) in het onderscheiden van grotere en kleinere bedrijven bij het verklaren waarom zo veel Duitse bedrijven kiezen voor het zelf opleiden van leerlingen. Voor kleinere bedrijven geldt dat de kosten van de leerlingen zo laag zijn in vergelijking tot de (in)directe opbrengsten, dat het plausibel is dat deze bedrijven hun opleidingskosten reeds zullen terugverdienen gedurende de opleidingsperiode, dan wel wanneer slechts een klein aantal leerlingen aanblijft voor een korte periode na afronding van de opleiding. Grotere bedrijven maken gemiddeld significante kosten gedurende de opleidingsperiode, zodat er

aanvullende redenen nodig zijn (boven de kosteneffectiviteit op de korte termijn) om hun voortdurende opleidingsinspanningen te verklaren.

Soskice (1994) onderscheidde twee condities die de opleidingsinvesteringen van grotere bedrijven helpen te verklaren. Ten eerste, als bedrijven de volledige opleidingskosten niet kunnen terugverdienen binnen de opleidingsperiode zelf, dan wordt het aanblijfpercentage van leerlingen belangrijk. Hoe meer leerlingen voor een langere periode aanblijven, des te hoger de additionele (in)directe opbrengsten van de opleiding die zullen worden terugverdiend. De andere cruciale factor is de relatieve prijs van de opleiding ten opzichte van de prijs van alternatieven. Bedrijven zullen opleiden zolang als de kosten van een leerlingwezenopleiding lager zijn dan de kosten van het bedrijfsspecifiek scholen van externe rekruten, plus de kosten van het risico dat men een 'citroen' huurt (een externe rekruut, die niet blijkt te voldoen). Met deze tweede factor wordt de keuze van andere actoren een belangrijk ingrediënt in het keuzeproces: zolang als de meeste bedrijven zelf opleiden, is niet alleen mogelijk maar zelfs slim om dat zelf ook te doen (vanwege het substantiële 'citroen' risico als men niet zelf opleidt in zo'n omgeving).

Binnen de Duitse institutionele omgeving (van onderwijs en arbeidsmarkt) is het niet alleen verstandig voor de grote meerderheid van Duitse bedrijven om te investeren in leerlingwezenopleidingen (paragraaf 3.7.2), maar ook voor de grote meerderheid van Duitse jongeren (paragraaf 3.6.1). De belangrijkste reden is dat Duitse bedrijven hun toekomstige vakkrachten overwegend rekruteren als leerlingen die ze zelf opleiden. Soskice (1994: 33) heeft er op gewezen dat het Duitse leerlingstelsel een 'rank-order' toernooi is: niet elke opleidingsplaats is even aantrekkelijk, en schoolverlaters ordenen leerlingwezenplaatsen op attractiviteit per bedrijfstak, opleidingsbedrijf, en zelfs binnen een individueel bedrijf. Duitse jongeren concurreren actief om de beste opleidingsplaatsen, omdat loopbaanperspectieven verschillen naar het beroep en het bedrijf waarin men wordt opgeleid. De (meer attractieve) bedrijven screenen zorgvuldig de schoolprestaties van sollicitanten, en nemen hen vaak ook nog zelf testen af. Dit creëert een belangrijk feedback effect: Duitse kinderen worden gestimuleerd om in hun vroege tienerjaren hard te werken op school, omdat ze voor hun inspanningen beloond zullen worden via een attractievere opleidingsplek aan het eind van hun tienerjaren.

En dit feedback effect veroorzaakt een ander feedback effect: omdat jonge mensen de neiging hebben hard te werken in de schooljaren voorafgaand aan een leerlingwezenopleiding, krijgen Duitse bedrijven leerlingen met een relatief fatsoenlijk (algemeen) kwalificatieniveau. Dit helpt hen om opleidingskosten laag te houden, in vergelijking met bedrijven in landen waar 16-jarigen minder gekwalificeerd zijn.

De Duitse casus laat zien dat zo lang als kinderen reeds hard werken op school, en bedrijven hun inspanningen daarna belonen met attractievere startbanen met bijbehorende loopbaanmogelijkheden, een stabiel hoog kwalificatie-evenwicht

mogelijk is in markten voor middelbare kwalificaties. We observeerden dat dat hoge kwalificatie-evenwicht wordt bereikt op een markt die vrij is (in de zin dat zowel bedrijven als leerlingen vrij zijn om de markt te betreden) maar gereguleerd (door leerlingwezenwetgeving en gerelateerde regulering zoals eindtermen voor opleidingsberoepen). En we observeerden dat het leidt tot overlappende beroeps- en interne arbeidsmarkten, die de voordelen van beide neigen te combineren.

## 4 De Amerikaanse markt voor middelbare kwalificaties: de casus Wisconsin

Onze volgende casus, de V.S. (hoofdstuk vier) toonde ons waarom zo'n hoog kwalificatie-evenwicht moeilijker te realiseren is dan het Duitse voorbeeld zou kunnen doen vermoeden. De V.S. lijdt aan wat wel gelabeld is als een 'missend midden' op haar arbeidsmarkt (Berryman et al.; 1992: 1).

Een belangrijke oorzaak voor de moeite die Amerikaanse jongeren hebben om banen met loopbaankansen te vinden ligt in het functioneren van Amerikaanse arbeidsmarkten. Aan de ene kant zijn beroepsarbeidsmarkten onderontwikkeld. Aan de andere kant vereisten Amerikaanse interne arbeidsmarkten doorgaans geen hoge kwalificaties van nieuwe rekruten, maar vertrouwden op geleidelijk informeel leren op de werkplek voor werknemers op de werkvloer.

De kleine omvang van het leerlingwezen is een voorbeeld van de onderontwikkeling van beroepsarbeidsmarkten. Enkel in de vakbondssector in de bouw heeft het leerlingwezen traditioneel een basis gelegd voor beroepsarbeidsmarkten (paragrafen 4.2.5 & 4.3.2). Daarbuiten ontbreken leerlingplaatsen geheel (zoals in het bankwezen, zie paragraaf 4.3.4) of zijn ze voorbehouden voor de opleiding van een kleine elite van zittende werknemers (zoals in de metaal, zie paragraaf 4.3.3). Dit verschil tussen Duitsland en Wisconsin is des te intrigerender omdat het regime voor het (volwassen) leerlingwezen in Wisconsin expliciet was geïnspireerd door het voorbeeld van het Duitse leerlingstelsel aan het begin van de twintigste eeuw (van Lieshout, 1996b). Klaarblijkelijk leidt het imiteren van leerlingwezenwetgeving niet noodzakelijk tot vergelijkbare resultaten. Hoewel er verschillen in leerlingwezenwetgeving bestonden tussen beide landen in het midden van de jaren negentig, lijken andere factoren belangrijker om de divergerende paden te verklaren die beide leerlingstelsels namen.

Ten eerste, het overwegend ontbreken van (regionale) collectieve arbeidsovereenkomsten die relatief hoge minimumlonen zetten per bedrijfstak en regio in Wisconsin impliceert dat bedrijven daar hun werknemers eenvoudiger informeel kunnen scholen op lagere loonniveaus dan hun tegenhangers in Duitsland. Omdat beginlonen voor reguliere werknemers in Wisconsin lager kunnen zijn dan in Duitsland, en omdat leerlinglonen relatief hoger zijn, is er een substantieel kleiner verschil (in termen van lagere opleidingskosten) ten gunste van het in dienst nemen

van leerlingen in vergelijking met het inhuren van dezelfde persoon als regulier werknemer die informeel op de werkplek wordt geschoold.

Een tweede belangrijke factor is dat Amerikaanse bedrijven relatief weinig ontslagbescherming bieden in vergelijking tot Duitse bedrijven. De combinatie van beide maakt dat Amerikaanse bedrijven eenvoudiger bedrijfsstrategieën kunnen kiezen die focussen op lage lonen en numerieke flexibiliteit. Tayloristische arbeidsorganisatie en Fordistische productiemethoden ontstonden in de V.S. en vormden de arbeidsorganisatie in Amerikaanse bedrijven. Belangrijk bewijs voor het effect daarvan op opleidingsbeleid en het leerlingwezen in het bijzonder komt van Parker's historisch onderzoek op de poging om een Duits-getint leerlingstelsel te creëren in de metaal in Wisconsin, in het district van Milwaukee in de eerste decades van de twintigste eeuw (Parker, 1994; 1996). Parker ontdekte dat terwijl deze metaalwerkgevers actief waren geweest in het organiseren van leerlingwezenopleidingen in de jaren twintig van de vorige eeuw, ze tegelijkertijd de basis daarvoor uitholden door geleidelijk Tayloristische en Fordistische productiemethoden te adopteren die de meerderheid van hun personeel in *semi*-gekwalificeerde banen deed belanden. Op die manier hadden ze vervolgens minder behoefte aan intensieve leerlingwezenopleidingen tot het niveau van geschoold vakman. In de jaren negentig van de vorige eeuw waren banen in de lagere regionen van menig metaal- en ander productiebedrijf in Wisconsin nog steeds relatief laag geschoold.

Ten derde, grotere loonverschillen maken het gemakkelijker om geschoolde werknemers weg te kopen dan in Duitsland. 'Wegkopen' is niet noodzakelijkerwijs een actieve daad van 'piraterij' door een ander bedrijf, maar kan zeer goed het gevolg zijn van een werknemer zijn eigen keuze om te vertrekken, zoals sommige historische verklaringen voor de teloorgang van het Amerikaanse leerlingwezen in de negentiende en twintigste eeuw hebben beargumenteerd (zie Elbaum, 1989; Jacoby, 1991; Elbaum & Singh, 1995).

Verder bieden technical colleges in Wisconsin een kwalitatief, schools alternatief voor een leerlingwezenopleiding, waarbij de opleidingskosten worden gedeeld door de student en de staat.

Tenslotte is het imago van het leerlingstelsel als een institutie in de V.S. altijd sterk (meer dan in Europa) verbonden met vakbondsinvloed, waarbij Amerikaanse vakbonden een lagere status hebben dan hun Duitse en Nederlandse tegenhangers (zie Jacoby, 1991).

Interne arbeidsmarkten kunnen worden beschouwd als een mechanisme om het wegkopen van geschoolde werknemers te voorkomen, omdat ze toegang tot de meest attractieve banen voorbehouden aan degenen die bij hun werkgever blijven (Sako, 1991). Amerikaanse interne arbeidsmarkten zijn gekarakteriseerd door de eerder genoemde Tayloristische en Fordistische traditie van arbeidsorganisatie in de Amerikaanse industrie. Ten eerste zijn banen in de lagere regionen van interne

loopbaanladders relatief laaggeschoold. Ten tweede wordt promotie vaak toegekend volgens geformaliseerde baanladders en regels van senioriteit. Buitenstaanders worden vaak overwegend op de lagere niveaus van deze loopbaanladders aangenomen. Omdat dergelijk entree banen geen leerlingplaatsen zijn, zijn jongeren net zo duur als volwassenen in zo'n baan. Dit is waarom Amerikaanse werkgevers in het algemeen de voorkeur hebben gegeven aan het inhuren van volwassenen met enige relevante werkervaring voor dergelijke banen (Osterman, 1980).

In theorie kan een ruim aanbod van kwalitatief schools beroepsonderwijs en een grote participatie daarin compenseren voor een gebrek aan scholing in bedrijven voor jonge mensen. Maar Amerikaanse interne arbeidsmarkten hebben jonge mensen over het algemeen weinig reden gegeven om te participeren in uitdagende schoolse beroepsonderwijscursussen:

- Ten eerste, kansen om bedrijven op een hoger baanniveau binnen te komen zijn relatief schaars, zodat certificaten van beroepsonderwijs niet direct toegang geven tot aantrekkelijker beroepsarbeidsmarkten; terwijl een verbazingwekkend aantal van 94,2% van Duitse werknemers aangaven dat ze officiële kwalificaties nodig hadden gehad om hun huidige baan te krijgen, gold dat voor slechts 55,8% van hun Amerikaanse tegenhangers (OECD, 1994b: 144);
- Ten tweede, entreeposities op Amerikaanse interne arbeidsmarkten vereisen typisch niet al te veel competenties;
- Ten derde, formele algemene of beroepskwalificaties hebben typisch minder geteld dan senioriteit voor promotie naar hogere rangen op interne loopbaanladders;
- Ten vierde, beloning is uitsluitend op baankenmerken gebaseerd, niet op eigenschappen van de werknemer – of zijn diploma's. Indicatief is dat het relatieve belang van variabelen, die samenhangen met menselijk kapitaal, in het verklaren van beloningsverschillen tussen bedrijfstakken substantieel lager is in de V.S. dan in Duitsland (Bellmann & Möller, 1995: 153).

De meeste jongeren die niet naar een vierjarig college gaan hebben daarom historisch gezien ervoor gekozen om direct de arbeidsmarkt te betreden, een zo attractief mogelijk on- of laaggeschoolde baan te aanvaarden als ze kunnen vinden, om van daaruit langzaam hun weg naar boven te werken. Hoewel Amerikaanse arbeidsmarkten gemiddeld een high school diploma iets belonen in termen van een loonpremie, vertrouwen Amerikaanse bedrijven niet erg op een high school diploma op zich. Klaarblijkelijk laat een gebrek aan algemene competentiestandaarden toe dat scholen voor jongere leeftijdsgroepen hun feilen en problemen doorgeven naar de top van het systeem (Tucker, 1994b: 3). Dit gebrek wordt niet gecompenseerd door een rigoureuze screening van high school prestaties door werkgevers wanneer ze jongeren en jongvolwassenen in dienst nemen. Voor eerste werkgevers is een

diploma op zich vaak voldoende. Er was geen relatie tussen schoolprestaties en de attractiviteit van eerste banen in de V.S. (Rosenbaum & Kariya, 1991). Tegen de tijd dat jongvolwassenen een werkgever vinden dien hen een aantrekkelijker entree positie op een interne arbeidsmarkt aanbieden, zal die werkgever de laatste baan van de sollicitant en eventuele (technische) college cursussen, die de betrokkene eventueel na zijn high school gevolgd heeft, interessanter vinden dan de high school resultaten van een paar jaar terug.

Hoewel Amerikaanse arbeidsmarkten dus jongeren niet echt stimuleren om hard te werken in het secundair onderwijs, doen (vierjarige) colleges dat wel. Het aantal afgestudeerden van een high school dat doorstroomt naar een (prestigieus) vierjarig college is traditioneel de meeste onderscheidende benchmark om de prestaties van Amerikaanse high schools te meten. Dit heeft studieroutes die voorbereiden op zo'n college tot de dominante route in Amerikaanse high schools gemaakt, en tegelijkertijd een onderontwikkeling van beroepsonderwijsprogramma's mogelijk gemaakt – in het bijzonder, omdat dergelijke programma's relatief duur zijn voor de gemiddeld kleine school districten in de V.S.. De algemene Amerikaanse afkeur voor het sorteren van jongeren in aparte paden heeft verhindert dat de ouders van deze 'vergeten helft' dergelijke aparte programma's hebben geëist. En om de vicieuze cirkel te voltooien: waar slechts weinig high school studenten afstuderen via goede beroepsonderwijsprogramma's, hebben Amerikaanse bedrijven weinig reden gehad om hun rekruteringspogingen voor hun meer uitdagende entreebanen op die high school afgestudeerden te richten.

Het is, in deze context, gemakkelijk te begrijpen waarom Amerikaanse two-year colleges, zoals de technical colleges in Wisconsin, een relatief succesverhaal zijn (Brint & Karabel, 1991): ze bieden kwaliteitsscholing in een laaggekwalificeerde context. Ze bieden, echter, tot dusverre geen soepele transitie van school naar werk voor de meerderheid van de jongeren die niet naar een vierjarig college gaat, zoals het Duitse leerlingwezen dat wel doet. In Wisconsin stromen relatief weinig jongeren direct na high school door naar een opleiding in het Wisconsin Technical College systeem. En slechts ongeveer een derde van de instroom daarin betrof werknemers op de werkvloer (Rogers et al., 1991). Het ontbreken van bindende eindtermen en assessmentprocedures op nationaal of staatniveau leidt niet tot een gegarandeerde minimum kwaliteit van beroepsonderwijs en scholing. En de versplintering van het beroepsonderwijs over verschillende onafhankelijke en gedecentraliseerde systemen die slechts zwak verbonden zijn, maakt de beschikbare opties niet erg transparant voor jongeren, hun ouders, of volwassen werknemers. Om kort te gaan, er zijn problemen van te weinig coördinatie en samenwerking op deze terreinen (Rogers & Streeck, 1991: 11).

In deze context hebben Amerikaanse beleidsmakers – zowel op nationaal niveau als in de staat Wisconsin – zich gestort op ambitieuze pogingen om het 'midden te bouwen' in de jaren negentig (Berryman et al, 1992). Ze ontwikkelden

hervormingspogingen die in zijn algemeenheid probeerden de transitie van school naar werk voor Amerikaanse jongeren te verbeteren door de ontwikkeling van gecoördineerde bedrijfstaksbrede beroepsonderwijsstelsels. Specifiek bevatten deze pogingen sommige beleidsopties die direct door het Duitse voorbeeld werden geïnspireerd. Maar in plaats van te opteren voor het kopiëren van de Duitse markt (zoals sommigen hadden bepleit) resulteerde deze ambitie uiteindelijk in een poging om gedeeltelijk 'Duitse' institutionele arrangementen te creëren – bijvoorbeeld nationale samenwerkingsverbanden om eindtermen te ontwikkelen, plaatselijke school-naar-werk partnerships, of specifieke jeugd-leerlingwezen programma's.

## 5 De Nederlandse markt voor middelbare kwalificaties

Hoofdstuk vijf analyseerde de Nederlandse casus. De Nederlandse casus lijkt op de Duitse in de zin dat hier ook sprake is van een hoog kwalificatie-evenwicht waarbij de meeste jongeren instromen in meerjarige beroepsonderwijsprogramma's (en veel daarvan, maar niet allemaal, daar ook weer met een diploma uitstromen). Arbeidsorganisatie en de rekruteringspraktijken van bedrijven hebben een premie gezet op substantieel initieel beroepsonderwijs voor jongeren op een vergelijkbare wijze als in Duitsland. Maar terwijl in Duitsland prikkels jongeren in een leerlingwezenopleiding leiden, biedt het Nederlandse stelsel meerdere opties, zowel voor bedrijven als jongeren. Ten eerste, zowel bedrijven als jongeren kunnen kiezen tussen zowel duale als (overwegend) schoolse paden die leiden naar een volledige beroepskwalificatie. Ten tweede, zowel bedrijven als jongeren hebben het alternatief van reguliere laag betaalde (jeugd)werkgelegenheid veel makkelijker beschikbaar dan hun Duitse tegenhangers – en meer vergelijkbaar met de V.S.. Terwijl Duitse laagbetaalde jeugdwerkgelegenheid overwegend is geïnstitutionaliseerd als leerlingwezenopleidingen (en als zodanig, scholingsrechten inhoudt), zijn er een aantal Nederlandse bedrijfstakken die een groot aandeel van jongeren op lage loonniveaus beneden het volwassen minimumloon in dienst nemen, in reguliere banen die geen formele scholing met zich meebrengen. Zowel de prominente rol van volledig kwalificerend schools beroepsonderwijs als de meer prominent rol voor reguliere jeugdwerkgelegenheid zonder scholing in sommige bedrijfstakken helpt het kleinere volume aan leerlingwezen opleidingen in Nederland ten opzichte van Duitsland te verklaren.

In vergelijking met de V.S. investeren Nederlandse bedrijven natuurlijk zelf ook substantieel in formele opleidingen op de werkplek: door het aanbieden van leerlingplaatsen, en door het aanbieden van stages voor studenten in (overwegend) schoolse beroepsopleidingen. In Nederland verschilt het relatieve belang van duale opleidingen, overwegend schools initiële opleidingen en reguliere jeugdwerkgelegenheid aanzienlijk tussen verschillende bedrijfstakken in de context van vergelijkbare nationale wetgeving. Dit onderstreept het belang van variabelen

op bedrijfstakniveau, inclusief verschillen in concepties van controle van bedrijven en andere belangrijke actoren.

## 6 Analyses van markten voor middelbare kwalificaties: verschillende handen

Het slothoofdstuk reflecteert op het theoretische kader dat we gebruikt hebben om onze drie casussen te analyseren. In het bijzonder adresseert het de vraag of en hoe het de moeite waard was om zo'n reguleringsbenadering die zich expliciet richt op meerdere alternatieve coördinatiemechanismen (markten, bedrijven, staten, associaties) en hun interactie. Konden we geen vergelijkbare resultaten vergelijken met een minder extensieve typologie van reguleringsmechanismen?

Voor wat betreft de rol van bedrijven als coördinatiemechanismen kunnen we hun opleidingsinvestering binnen een land op het eerste gezicht heel aardig verklaren als logische reacties op een verschillende institutionele omgeving. Het hoge aanblijfpercentage van leerling na afronding van hun opleiding en verwachtingen over het gedrag van anderen (zowel leerlingen als bedrijven) zijn echter eveneens belangrijke factoren in de verklaring van de ruime opleidingsinvesteringen van Duitse bedrijven. Wanneer we verschillen in opleidingsinvesteringen tussen landen bekijken, springt direct het belang van de arbeidsorganisatie binnen bedrijven in het oog als directe oorzaak ('proximate cause') voor de verschillende rol van het leerlingwezen in de V.S. en Duitsland. Externe institutionele verschillen (bijvoorbeeld in wetgeving en arbeidsverhoudingen) kunnen vervolgens worden geanalyseerd als indirecte oorzaken ('remote causes'). Dergelijke factoren beïnvloeden de arbeidsorganisatie zoals die zich binnen bedrijven ontwikkelt. Ze beïnvloeden opleidingskeuzen indirect doordat ze eerder de ontwikkeling van de arbeidsorganisatie hebben beïnvloed, en direct doordat ze op dit moment (samen met de bestaande arbeidsorganisatie) de verwachte opbrengsten van alternatieve opleidingskeuzes bepalen.

Naast arbeidsorganisatie is rekrutering een belangrijke interveniërende variabele. Zo zagen we dat in het (volwassen) leerlingstelsel in Wisconsin het vaak zittende werknemers waren die daarna leerling werden, terwijl in Duitsland overwegend schoolverlaters in dienst worden genomen. Het is, dus, niet vanzelfsprekend dat een leerlingwezenwet een soepele overgang van school naar werk garandeert: dat doen ze alleen als bedrijven schoolverlaters in dienst nemen.

Instituties verschaffen een omgeving waarop bedrijven reageren – maar bedrijven kunnen verschillend reageren op vergelijkbare omgevingen. Nationale verschillen in de arbeidsorganisatie en het personeelsbestand in bedrijven kunnen zo objectieve redenen zijn voor het feit dat verschillende bedrijven verschillende reageren op vergelijkbare externe prikkels. Opleidingskeuzes van bedrijven zijn in de praktijk zelden de uitkomst van een gedetailleerde kosten/baten vergelijking, maar reflecteren een meer kwalitatieve strategische keuze. De theoretische notie van

een actie oriëntatie van bedrijven past goed bij het empirische bewijs op dit punt. Een goed voorbeeld is dat Duitse bedrijven (en hun organisaties) in opstand komen als de staat dreigt zich *meer* met de bekostiging van opleidingen te interveniëren, terwijl Nederlandse bedrijven dat deden toen ze vreesden dat de overheid zich op dat punt wat zou terugtrekken.

Leerlingwezenopleidingen zijn een goed voorbeeld van hoe een bedrijf als een alternatief coördinatiemechanisme kan opereren voor een (externe) arbeidsmarkt. En we hebben gezien dat zelfs leerlingwezenopleidingen, gebaseerd op vergelijkbare wetgevingsprincipes, verschillende vormen kunnen aannemen in verschillende landen – en sectoren.

Het belang van associaties als coördinatiemechanisme werd door Streeck et al. (1987) al getoond op basis van hun belangrijke rol in de regulering van het Duitse leerlingwezen, en ook in Nederland spelen associaties een belangrijk (en groeiende) rol. In de V.S. spelen ze over het algemeen juist geen grote rol. Maar in het uitzonderingsgeval waar ze dat wel doen – in de vakbondssector in de Amerikaanse bouw – zien we dan een florerend leerlingstelsel in een land waar daar overigens geen sprake van is. Collectieve arbeidsovereenkomsten kunnen helpen om leerlinglonen laag te houden vergeleken met die van (half)geschoolde werknemers. In ruil kunnen daarvoor scholingsrechten voor de leerlingen worden vastgelegd, bijvoorbeeld door bindende eindtermen. En ze kunnen helpen een consensus ten gunste van opleidingsinvesteringen in een gemeenschap van bedrijven in stand te houden.

Men moet het belang van associaties echter ook niet overschatten. Zo is wel eens te nadrukkelijk gewezen op het feit dat Duitse werkgeversorganisaties hun leden zouden stimuleren tot opleiden. Dat doen ze wel, maar de motor achter het Duitse leerlingwezen zijn de vrije opleidingskeuzes van bedrijven. Vermeldenswaard is ook dat de Duitse hoge opleidingsinvesteringen overwegen tot stand komen zonder de collectieve steun van opleidingsfondsen zoals die in Nederland veel voorkomen (en de Amerikaanse bouw). Naast Duitse werkgeversorganisaties zijn ook de strategische keuzes van Duitse vakbonden van belang.

Het belang van bedrijven en associaties als coördinatiemechanismen ontkent niet het belang van marktmechanismen, maar beïnvloed hoe die marktmechanismen precies opereren. Markten voor middelbare kwalificaties niet goed te modelleren als een enkele markt met een enkel uniform product. Omdat bedrijven zowel producent als consument van kwalificaties zijn, zijn aanbod- en vraagzijde van de markt niet goed te scheiden. Maar marktmechanismen spelen ook op *meerdere* punten een rol. Er is tenminste een marktmechanisme waar jongeren voor beroepsopleidingen kiezen, en een markt waar afgestudeerde jongeren banen zoeken. Deze twee markten worden verbonden door beroepsopleidingen.

Als bedrijven kiezen voor het zelf opleiden van leerlingen kiezen ze analytisch gezien voor het bedrijf als coördinatiemechanisme boven de markt. Maar ook dat

betekent niet dat de externe markt geen rol speelt. In Duitsland zien we dat juist het feit dat opleidingsbedrijven leerlingen langdurig aan zich binden leidt tot gefocuste matchingsprocessen in de markt voor opleidingsplaatsen – resulterend in een 'rank-order' toernooi. De georganiseerde markt van het Duitse leerlingwezen lijkt tot gewenster gedrag van bedrijven en jongeren te leiden dan de ongeorganiseerde Amerikaanse markt.

Internationale verschillen in de rol van andere reguleringsmechanismen betekenen dat overheden een verschillend terrein bespelen als ze beroepsonderwijs- en scholingsmarkten reguleren. Vergelijkbare pogingen tot wetgeving kunnen zo tot divergerende resultaten leiden. Net als bij regulering door associaties moeten we ook de autonome macht van overheden bij de regulering van beroepsonderwijs en scholing niet overschatten. Met die kanttekening zijn er drie waardevolle doelen ze door beleid kunnen proberen te bereiken in eigen land:

- Bedrijven die actief jongeren rekruteren;
- Bedrijven die jongeren actief screenen, en schoolprestaties daarbij betrekken;
- Jongeren die lokaal actief geholpen worden met hun overgang van school naar werk.

Het belang van de rol van andere reguleringsmechanismen moet overheden leren dat arbeidsmarktregulering zeker zo belangrijk is als de regulering van (beroeps) onderwijs. Een tweede belangrijk aspect is vanzelfsprekend de institutionalisering van scholen en hoe ze opereren. De verschillen in de rol van scholen in de drie nationale beroepsonderwijsstelsels die we hier bestudeerden is in elk geval een reflectie van bredere verschillen in markten voor middelbare kwalificaties.

We concluderen dat regimes die beroepsonderwijs en scholing reguleren uit meer bestaan dan overheden en hun wetgeving en beleid. Een effectieve analyse van reguleringsregimes voor beroepsonderwijs en scholing beschouwt tenminste vier potentieel equivalente coördineringsmechanismen: marktmechanismen; hiërarchieën (bedrijven); overheden, en associaties. Voor overheden betekent het relatieve gebrek aan autonomie om eenzijdig een effectief reguleringsregime te bepalen dat er niet *één* onzichtbare hand is die beroepsonderwijs- en scholingsmarkten in elke regio en elke bedrijfstak op een vergelijkbare manier regelt. De hand die elke feitelijke markt voor middelbare kwalificaties reguleert is een specifieke combinatie van de vier bovengenoemde reguleringsmechanismen. Vergelijkbaar overheidsbeleid kan leiden tot duidelijk verschillende uitkomsten vanwege verschillen in de rol van andere reguleringsmechanismen, en omgekeerd. Nationale overheden hebben zo geen andere serieuze optie dan hun eigen weg te gaan bij de ontwikkeling van hun markt voor middelbare kwalificaties. Het kopiëren van regelgeving uit andere landen zal zelden tot vergelijkbare resultaten leiden. Internationale vergelijkingen kunnen wel helpen om nieuw licht te werpen op

sterkten, zwakten en bijzonderheden in eigen land, en alternatieve ideeën helpen genereren voor verbeteringen in eigen land.

## Curriculum vitae

Harm (Hendrikus Antonius Maria) van Lieshout was born May 1st, 1968, in 's-Hertogenbosch (the Netherlands). He graduated from Gymnasium B in 1986. He studies sociology at Utrecht University (the Netherlands) where he completed his master in 1992. After a thorough training in general sociological research methodology, he chose to specialize in the field of labor market studies, and completed courses in various disciplines relevant to this field. In addition, he became active in student politics. He was a student member of the Faculty Council at the Faculty of Social Sciences (1989-1990) and the student member of the Faculty Board at that same Faculty (1990-1992). His master thesis allowed him to combine his interests in labor market studies and educational policy, as it was based upon an internship with a policy-oriented research project from the Dutch Scientific Council for Government Policy on ongoing policy reform efforts in Dutch vocational education and training.

He continued in the wake of that project, to analyze and compare markets for intermediate skills internationally, as a Ph.D. student with the Netherlands School for Social and Economic Policy Research at that same university (1993-1997). He acquired several additional funds to help pay for the field work (including a DAAD grant for a stay at the German Bundesinstitut für Berufsbildung and a Fulbright grant for a stay at the Industrial Relations Research Institute at the University of Wisconsin-Madison) and published books/reports on Germany, the U.S., and a four-country comparison, besides various articles and papers.

In 1997, he was invited to join the Hugo Sinzheimer Institute (a policy-oriented labor law and labor market research institute at the University of Amsterdam) as a senior researcher to develop their research portfolio in the field of education and training. From 1997 through 2003, he helped acquire various projects in this field, and published the resulting findings in various books and articles. He also assisted his colleague Dr. Ton Wilthagen to acquire program funding from the Dutch Organization for Scientific Research (NWO) for a three-year 'Flexicurity' research program in 2003.

In 2003, he was invited to join the Hanze University of Applied Sciences in Groningen (the Netherlands) to set up and lead the applied research group ('lectoraat') industrial relations there. From there, amongst many other things, he participated in and helped to oversee the aforementioned 'Flexicurity' NWO program (chaired by Professor Ton Wilthagen at the University of Tilburg, in collaboration with the Hugo Sinzheimer Instituut). Besides other projects, Van Lieshout acquired an applied research grant ('RAAK MKB') for Hanze University for a program on the temporary employment of migrant workers from 'new' EU member states in the Netherlands in 2006.

In 2007, Hanze University decided to expand their applied research in the field of labor market studies into a Centre for Applied Labor Market Research and Innovation that will consist of four related applied research groups. Van Lieshout will continue there as a Professor of Applied Sciences in Flexicurity at the Hanze University Law School, and will report on behalf of the Centre's professors to the Centre's Board of Deans.